

County Borough



of Halifax.

HEALTH DEPARTMENT.

Report

OF THE

MEDICAL OFFICER OF HEALTH,

TOGETHER WITH THE REPORTS OF THE

SANITARY INSPECTOR

AND

THE BOROUGH ANALYST,

FOR THE

52 Weeks ended January 1st, 1898.

WHITLEY & BOOTH, PRINTERS, ETC.. HALIFAX.



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Printed by Order of the Health Committee.

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1898.

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County Borough of Halifax.

REPORT of the MEDICAL OFFICER of HEALTH

For the 52 weeks ended Jan. 1st, 1898.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

In accordance with instructions from the Local Government Board, I have the honour of presenting you with my twenty-fifth Annual Report on the Health and Sanitary Conditions of the Borough.

The Summary below and the Table opposite give the leading factors of our Vital and Mortal Statistics for the year 1897 (which are treated more at length in the text), from which it will be seen that we continue to maintain a favourable position among the great towns for the lowness of our death-rates, both general and zymotic.

VITAL STATISTICS—Summary.

Area of County Borough	...	...	8,209 acres
Rateable Value	..	...	£382,153
Population in 1897	...	...	95,747
" 1891 Census	..	...	89,832
Persons per acre, 1897—11·6. Excluding Illingworth Ward	...	...	22·6
Average number of persons per house, 1891 Census			4·6
Birth-rate, 1897	..	...	22·4
" average for previous 10 years	..		25·1
Death-rate, 1897	...	...	16·3
" average for previous 10 years	...		19·1
" for seven principal Zymotic Diseases	...		1·3
" the mean, for 10 years of Zymotic Diseases, 1888-97	...	...	1·3
" of Infants under one year of age per thousand births	...	...	140·1
Illegitimate Births	...	...	44
Average age at death, 1897, Males	..		35·3 years
" " Females	...	...	37·9 years
(Infants under one year reckoned one year.)			

Analysis of the Vital and Mortal Statistics of Thirty-three of the largest English Towns during the year 1897.

TOWNS.	Estimated Population Middle of 1897.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Zymotic Diseases	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhoea.	Deaths of Children under 1 year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.	Principal Zymotic Diseases.										
33 Towns	10,992,524	336,740	209,410	30.7	19.1	2.87	31,479	18	6,049	1,967	3,417	4,453	1,958	13,617	177	1.3
32 Provincial Towns	6,529,355	203,122	128,469	31.2	19.7	3.06	19,954	2	4,120	1,187	1,156	2,611	1,365	9,513	189	1.7
London	4,463,169	133,618	80,943	30.0	18.2	2.58	11,525	16	1,929	780	2,261	1,842	593	4,104	159	0.6
West Ham	273,682	8,779	4,273	32.2	15.7	2.62	714	—	140	30	101	99	48	296	172	2.7
Croydon	121,171	3,015	1,579	25.0	13.1	1.43	173	—	17	12	8	31	9	96	135	—
Brighton	121,401	2,986	1,823	24.7	15.1	1.64	198	—	17	12	12	25	22	110	144	0.8
Portsmouth	182,585	4,897	2,951	26.9	16.2	2.53	462	—	35	11	28	64	43	281	168	0.4
Plymouth	97,658	2,773	1,855	28.5	19.0	2.17	213	—	49	5	13	53	8	85	185	0.3
Bristol	232,242	6,430	3,984	27.8	17.2	1.83	425	1	57	18	35	116	47	151	149	0.9
Cardiff	170,063	5,279	2,534	31.1	14.9	2.19	372	—	75	17	90	34	21	35	151	0.9
Swansea	100,309	2,939	1,583	29.4	15.8	1.36	136	—	45	10	11	42	7	21	140	1.2
Wolverhampton	87,287	3,054	1,910	35.1	22.5	4.22	367	—	46	21	54	38	24	184	217	0.6
Birmingham	505,772	16,803	10,889	33.3	21.6	3.88	1,958	—	398	93	147	221	92	1,007	214	3.2
Norwich	110,154	3,354	2,062	30.5	18.8	2.21	243	—	3	11	10	47	32	140	194	1.5
Leicester	203,599	6,206	3,586	30.6	17.7	3.13	637	—	14	71	73	82	39	358	205	2.4
Nottingham	232,934	6,717	4,363	28.9	18.8	2.81	652	—	48	36	21	113	49	385	206	1.1
Derby	103,291	2,792	1,651	27.1	16.0	1.91	197	—	17	10	9	22	26	113	168	—
Birkenhead	111,249	3,507	2,026	31.6	18.3	2.45	272	—	55	23	26	32	27	109	164	1.1
Liverpool	633,078	22,289	15,384	35.3	24.4	3.83	2,412	—	340	206	126	351	168	1,221	200	3.4
Bolton	121,433	3,942	2,660	32.5	22.0	4.02	486	—	215	23	6	41	25	176	186	0.2
Manchester	534,299	17,708	12,306	33.2	23.1	3.81	2,032	—	629	124	47	300	100	832	195	1.2
Salford	213,190	7,454	5,083	35.1	23.9	5.50	1,168	—	473	61	32	112	66	426	219	1.8
Oldham	145,845	3,793	2,789	26.1	19.2	2.61	378	—	97	20	11	77	20	153	183	0.2
Burnley	106,122	3,151	2,065	29.8	19.5	3.98	420	—	141	5	60	63	19	132	220	1.5
Blackburn	131,330	3,625	2,554	27.7	19.5	3.45	453	—	146	7	8	82	38	172	206	2.2
Preston	115,103	3,659	2,796	31.9	24.4	5.64	648	—	318	5	4	30	35	256	262	3.2
Huddersfield	101,454	2,366	1,659	23.4	16.4	1.50	150	—	27	32	20	21	15	35	131	2.8
Halifax	95,747	2,150	1,574	22.5	16.5	1.39	134	—	48	21	9	9	16	31	140	2.5
Bradford	231,200	5,079	4,024	24.0	17.5	2.22	510	—	81	9	15	43	31	331	179	1.2
Leeds	409,472	12,911	8,118	31.6	19.9	2.80	1,140	—	163	94	67	96	80	640	190	0.6
Sheffield	351,848	12,071	7,438	34.4	21.2	3.49	1,222	—	195	90	44	142	110	641	198	2.8
Hull	225,045	7,485	4,166	33.3	18.6	3.25	731	1	24	61	32	56	56	501	181	1.6
Sunderland	142,107	4,905	2,792	34.6	19.7	2.56	363	—	63	11	4	77	38	170	165	1.0
Gateshead	101,070	3,612	1,842	35.8	18.3	2.33	234	—	50	17	8	31	20	108	172	0.7
Newcastle-on-Tyne	217,555	6,791	4,141	31.3	19.1	2.09	452	—	74	21	25	61	34	217	178	0.9

These figures are compiled from the Quarterly Returns of the Registrar General, and differ slightly from our own.

Population.—The Borough is divided into Twelve Wards, and the following are the Areas and Estimated Population of the Divisions in the middle of 1897.

WARDS.			Acres.	Population.	Number of Persons to an Acre.
SOUTHOWRAM	...	...	777	7468	9·6
SKIRCOAT	...	...	513	7819	15·2
EAST	...	...	191	8586	44·9
SOUTH	...	...	296	8569	28·9
KINGSTON	...	...	238	8138	34·1
WEST	...	...	86	9628	111·8
PELLON	...	..	241	7758	32·1
CENTRAL	...	...	82	8875	108·2
NORTH	...	...	168	7829	46·6
NORTHOWRAM	...	...	582	6926	11·9
OVENDEN	...	..	531	6925	13·0
ILLINGWORTH	...	...	4504	7226	1·6
TOTAL	...	...	8209	95747	11·6

Marriages.—During the year 1524 marriages took place in the Borough, being equal to a rate of 15·9 per 1000 of the estimated population. This is only a fraction below the rate for England and Wales, which is 16·0 per 1000.

Births.—The number of births registered within the Borough during the year ended January 1st, 1898, is 2147, composed of 1096 males and 1051 females, giving a birth-rate of 22·4 per 1000 of the population. This is a decrease of 2·1 on the previous year, and of 2·7 on the average of the 10 years 1888-97. The mean for the 33

large towns for the same period is 30·7. Halifax birth-rate for 1897 is the lowest of all the large towns, closely followed however by Huddersfield 23·4, and Bradford 24·6. Included in the above number of births are 44 registered as illegitimate, against 65 and 73 in the two preceding years. It is a gratifying circumstance to note the yearly decline of illegitimacy which has been constant for a number of years.

Vaccination.—By the kind permission of the Superintendent Registrar, the Vaccination Officer has obliged me with the returns for the Borough, which are as follows :—

NUMBER OF SUCCESSFUL PRIMARY VACCINATIONS
OF PERSONS, FOR THE YEAR ENDED
29th SEPTEMBER, 1897.

Under One Year of Age.	One Year and upwards.	Total.	Number of Successful Re-Vaccinations.
12	24	36	9

From the above figures it will be seen that vaccination is practically obsolete in the Borough, and whenever the next outbreak of Small-pox occurs we may expect to have it pretty “hot” in such an unprotected community, a condition of things for which the Health Committee is not responsible, and yet will have to bear the brunt and expense if such a calamity should visit the town.

Deaths.—The deaths registered within the Borough for the 52 weeks ended January 1st, 1898, numbered 1570, composed of 813 males and 757 females. The average age at death of the former is 35·3 years, and of the latter 37·9. The death-rate for 1897 is equal to 16·3 per 1000 of the population, against 16·3, 19·3 and 17·5

of the three previous years respectively. The average for the ten preceding years, 1887-96, being 19·1.

In the 33 large towns dealt with by the Registrar-General in his weekly returns, the death-rate in 1897 equalled 19·1 per 1000 of the population, and ranged from 13·1 in Croydon, 14·9 in Cardiff, 15·1 in Brighton, to 23·9 in Salford, and 24·4 in Liverpool and in Preston. See Table, page 5.

Infant Mortality.—Of the 1570 deaths in the Borough in 1897, 301 were of infants under one year of age, being a decrease of 50 on the previous year. Infant Mortality, measured by the proportion of deaths under one year to registered births, is equal to 140 per 1000, against 158 and 149 in the two preceding years.

In the 33 large towns (including Halifax) the rate of Infant Mortality in 1897 averaged 177 per 1000 births, and exceeded the rate in Halifax by 37. It will thus be seen that we compare very favourably with other towns. The figures of other Yorkshire County Boroughs are, Huddersfield 131, Bradford 179, Leeds 190, Sheffield 198, and Hull 181. See Table, page 5.

TABLE SHOWING NUMBER OF BIRTHS AND BIRTH-RATES IN EACH QUARTER OF 1896-7.

	Males.		Females.		Total.		Birth-rate per 1000 living.	
	1897.	1896.	1897.	1896.	1897.	1896.	1897.	1896.
1st Quarter ...	249	267	253	307	502	574	20·9	24·2
2nd „ ...	275	292	252	289	527	581	22·0	24·5
3rd „ ...	275	292	286	264	561	556	23·4	23·4
4th „ ..	297	324	260	294	557	618	23·2	26·0
Total ..	1096	1175	1051	1154	2147	2329	22·4	24·5

Mortality at Groups of Ages.—The 1570 deaths in Halifax in 1897 include 490 of children under 5 years of age, or 31·2 per cent. of the total deaths; between the ages of 5 and 15 years, 60 deaths occurred, or 3·8 per cent.; between 15 and 25 years, 73 deaths took place, or 4·6 per cent.; 479, or 30·5 per cent. were registered between the ages of 25 and 60 years, and at 60 years of age and upwards, 468, or 29·8 per cent.

TABLE SHOWING TOTAL NUMBER OF DEATHS, TOTAL AGES LIVED, AND AVERAGE AGE AT DEATH, AT DIFFERENT AGE PERIODS, 1897.

MALES.				FEMALES.			
	Deaths.	Total Years.	Average Ages.		Deaths.	Total Years.	Average Ages.
0-1 ..	168	168		0-1 ...	131	131	
1-5 ...	101	200		1-5 ...	91	210	
5-15 ...	28	240	8·5	5-15 ..	31	266	8·5
15-25 .	35	690	19·7	15-25 ...	37	714	19·2
25-60 ...	252	11572	45·9	25-60 ...	233	10473	44·9
60 & up-wards	227	15800	69·6	60 & up-wards	241	17234	71·5
Total .	811	28670	35·3	Total ...	764	29028	37·9

In Table 2, page 24, are given the rates of mortality that prevailed in 1897 among the persons estimated to be living in each of the above-mentioned age periods as shown by the census of 1891. In the same table are inserted similar rates of mortality in previous years for comparison. The death-rate of children under 5 years of age, which was 56·5 and 55·9 in the two preceding years, fell to 52·3 in the year under review, and is 3·1 below the mean of the decade 1887-96. The rate of

mortality at the next age period, 5-15, which was 2·1 and 1·8 in the two previous years, rose to 2·1 ; between the ages 15-25 the rate is 4·4, against 5·8 and 4·4 in the years 1895-6. Among persons aged 25-60 years the rate is 15·0, against 17·3 and 15·6 in the two preceding years. Among persons aged upwards of 60 years the rate of mortality is equal to 77·4 per 1000 living at those ages, against 85 in 1896. The mean for the last decennium being 87·0.

Causes of Death: Zymotic Diseases.—The 1570 deaths in the Borough last year included 134 which were referred to the principal zymotic diseases, against 127, 157, and 100 in the three preceding years respectively. These 134 deaths are equal to 8·5 per cent. of the total deaths, and to an annual rate of 1·39 per 1000 of the population, against 0·9, 1·3, and 1·5 in the years 1894-6. In the ten years 1887-96 the mean zymotic death-rate in Halifax was 1·4. It must be gratifying to the Committee to know that if we have not the lowest zymotic death-rate of all the large towns, the same as we had in 1896, we are only a decimal below Swansea, which has the honour of being the lowest for the year 1897. For the same period the average zymotic death-rate for the whole of the large towns of England and Wales is 2·87, that is, more than double that of our own town.

Small-Pox.—The year under notice, like its predecessor, has been entirely free from small-pox. Whether the recommendations of the Vaccination Committee be carried out by the Guardians remains to be seen ; but reference to a previous paragraph in this Report shows how that Body is neglecting its duties in the non-enforcement of the Vaccination Laws, and yet the cost and trouble and disgrace of an epidemic of small-pox

would fall on the Sanitary Authority. It has been obvious for years that the control of vaccination ought to be in the hands of the Local Sanitary Authority, *i.e.* the Health Committee and the Town Council. The Government ought to lose no time in passing an Act embodying the main recommendations of the recent Commission.

Measles.—This troublesome and very infectious disease has been more prevalent during the last two years than for many years past. In 1896 we had two epidemics, and last year, although the town remained partly clear for nine months, yet during the last three months of the year it increased so rapidly that the number of deaths (47) are three times more than the whole of those in 1896. The number of deaths for the three preceding years are 32, 9, and 15 respectively. The average for the ten years 1887-96 is 28·3. The Ward mortality is very various, and no doubt also a rough guide as to the prevalence of attacks in the different Wards. But the prevailing winds of the last three months of the year seem to have determined the course of the epidemic wave. The first cases occurred in October in Southowram Ward (10 deaths), then spread to East Ward (11 deaths), on to Central Ward (8 deaths), and forward to Ovenden Ward (10 deaths). North, Skircoat and Kingston Wards had no deaths, and South and Pellon Wards one each. The wave was, therefore, carried by the East, South, and South-East winds from October to December along the direction indicated, and fell with increased incidence on those Wards. Influenza has been markedly tracked in the same manner. (See Table A.)

Scarlet Fever.—During the past seven years there has been a gradual and marked decline in the

number of cases of scarlet fever notified in the Borough, as the following numbers show, commencing at the year 1890—328, 429, 256, 150, 114, 52, 44. At the beginning of 1897, therefore, there must have been thousands of children unprotected by any previous attack, so that when the disease was introduced among so many susceptible persons one can scarcely wonder at the spread which it has made. In April the largest number of cases were reported from the Moorside District, in the Southern extremity of Illingworth Ward. The District Inspector (Bottomley) investigated the surroundings of every case. The Chief Inspector and myself also gave considerable time and attention to the matter. As a result, some insanitary conditions of the Board School were attended to, drains re-laid, &c., and the outbreak subsided. In June, however, a much more serious epidemic occurred in the Skircoat district. The following Report which I presented to the Committee, and a copy of which was also sent to the County Council and to the Local Government Board, gives the particulars up to the time of writing it (August 12th).

COUNTY BOROUGH OF HALIFAX.

REPORT ON THE RECENT OUTBREAK OF SCARLET FEVER.

To the Chairman and Members of the Health
Committee.

Gentlemen,

On Saturday, the 19th of June, eight cases of Scarlet Fever were notified to the Health Department, and five more on the following Monday, the 21st.

As this was an unusual number for us to receive in two days, especially from one district, viz., Savile Park, Inspector Archbell received instructions on the Monday morning to visit the address of every case notified, and

ascertain the milk supply in each case. In less than two hours we had the information that every one of the reported cases received milk from one or the other of two purveyors, Mr. Valentine and Mr. Fell, the latter being only a dealer, and living in the immediate neighbourhood. The Inspector called upon him first and satisfied himself that there was no cause of suspicion in Mr. Fell's house. Enquiring of Mr. Fell as to his milk supply, the Inspector was informed that he received about five gallons a day from a Mr. Valentine, a farmer, living about a mile on the west side of the town, and a larger quantity also from a farmer in Warley. The Inspector then visited the latter place and could find no trace of scarlet fever there. He then went to the farm of Mr. Valentine and found evidence of scarlet fever in several members of the family, who had been, or were ill, without any medical attendant. All this was reported to me at noon of the same day, and, accompanied by the Chief Inspector, I went at once to the farm, and found a boy, aged 13, fresh in the fever, had a good rash out and sore throat, &c., and going freely about the premises in and amongst the cows. Mr. Valentine himself was in bed with a sore throat, and Mrs. Valentine showed some signs of desquamation, although she stoutly denied having been ill. Besides the above there was an elder son aged 19, who took the milk to the town, and a farmer's man, who did the milking and other work on the farm; the latter had not complained of anything, but the elder son had had a very sore throat, and still kept to his work. Here, of course, was the source of all the mischief. Seeing that the farmhouse was infected we decided to allow the milk to be sent to the town, under certain conditions, viz., that the farmer's man and the elder son, who had the management of the milk business, take lodgings in the neighbourhood,

and on no account whatever to go into the house. The milk also was not to go near the house. These instructions, I believe, were carried out. The boy, aged 13, was at once removed to the Hospital, and the premises disinfected. The elder brother also went to the disinfecting station, had a bath, and all his clothes stoved.

Having learnt that the farm was just outside the Borough, and was in the jurisdiction of the Halifax Rural District Council, I wrote to Dr. Storr, the newly appointed Medical Officer of Health of that Council, who resides at Brighthouse, informing him what we had done, and practically handed the matter over to him, who, I may say, on one of his visits, persuaded Mrs. Valentine to go into Hospital, considering her to have some evidence of peeling. A younger brother, who commenced a few days afterwards, was also sent into Hospital.

As soon as possible after our first visit we obtained a list of the customers, both of Mr. Valentine and Mr. Fell. Two Inspectors were then instructed to visit every one of them, accompanied by the Medical Officer of Health, with the object of finding out cases which had been considered too mild to require a medical attendant ; as a result we may divide them into three groups. First, those notified by medical men directly caused by the milk ; second, those found by the Inspectors on the milk round ; and third, those which have been notified or otherwise come to our knowledge, who have been infected from the first cases. Up to this date, August 9th, 24 cases belong to the first of these divisions, 14 to the second, and 10 to the third, making a total of 48. Of these, 12 have been removed to our Hospital, and the remainder treated at home. Two patients have died in the Hospital. Perhaps I ought to remind you that apart from this outbreak our

number of scarlet fever cases have been swelled by the recent attacks in the Crossley & Porter Orphanage, numbering 53, with one death, and which was said to have been imported by one of the scholars.

D. AINLEY,

Medical Officer of Health for the County Borough
of Halifax.

So many households had been invaded that during the remainder of the year (four months and a-half) the disease continued to spread until the total number notified reached 145 in Skircoat Ward, and the adjoining Ward (Kingston) 44. The total number of cases notified in the Borough for the year is 481, and the number of deaths 22, giving a case mortality of 4·5, which is below the average.

In the Table, page 16, showing the probable causes of the three principal zymotic diseases, it will be seen that out of 481 cases of scarlet fever, only nine are referred to bad drainage, or in fact to any insanitary condition, and this experience is confirmed year after year. The chief causes of the spread of scarlet fever (apart from milk) are principally two: 1st, errors of diagnosis by parents, who treat them for measles, and hence take no precautions against spreading the infection, and send them to school, in a peeling condition, in about three weeks; and 2nd, mild cases of scarlet fever, which have not been considered bad enough for a doctor, so they never get notified, but recover apparently in three or four weeks, and are sent back to school, like the others, while they are desquamating. It would seem that the School Authorities require to exercise more vigilance in this matter, and to acquaint themselves not only of the fact of a child's absence, but also the true cause of such

absence, and this information should not be obtained by asking a neighbouring scholar to enquire, but through the official visit of an appointed responsible officer.

TABLE SHOWING THE SANITARY CONDITIONS AND PROBABLE CAUSES OF THE NOTIFIED CASES OF THREE PRINCIPAL ZYMOTIC DISEASES.

DISEASES.	Number of Cases notified.	Drainage		Ventilation		Old Middens.	Goux Closets.	Water Closets.	Probable or Assigned Causes.						
		Good	Bad	Good	Bad				From a Cold.	From a previous Case in the same House or School.	From Defective Drains.	Contracted from House or Workshop Visiting.	Other Cases in the neighbourhood.	Milk Supply.	No Trace.
Scarlet Fever ... Deaths, 22	477	468	9	477	...	7	384	86	...	*147	...	36	38	48	208
Typhoid Fever.. Deaths, 16	78	68	10	78	...	2	72	4	12	1	10	5	...	..	50
Diphtheria ... Deaths, 9	67	52	15	65	2	1	63	3	4	13	13	2	...	...	35
Total ...	622	588	34	620	2	10	519	93	16	161	23	43	38	48	293
Total Deaths, 47															

* 61 of this number occurred in the Crossley and Porter Orphan Home.

Taking the old middens at 656, the w.c.'s at 4500, and the Goux (pail) closets at 14,444, the percentage of cases to one or other will be as follows :—Old middens, 1·52 ; w.c.'s, 2·06 ; Goux closets, 3·59. In 1896 the figures were :—Old middens, 1·26 ; w.c.'s, 0·25 ; Goux closets, 1·02 respectively.

Diphtheria.—During the year 67 cases of Diphtheria have been reported, against 43 and 37 in the two preceding years. 7 deaths have been registered, equal to a case mortality of 10·4 per cent. ; this is a great reduction on the previous year, which was 43·2 per cent. Further reference is made to the sanitary condition of the surroundings of these cases in table opposite.

Whooping Cough.—There is a marked decline in the number of deaths from this disease in 1897, compared with the four previous years, which were 32, 21, 24, and 33. 1897, probably owing to its more equal climatic conditions, only registers 12 deaths. The mean of the ten years, 1887-96, is 21·8.

Fever.—This term includes typhus, enteric, simple continued, and ill-defined forms of fever, to which 17 deaths are referred against 22 in the previous year, and 16 and 12 in 1894-5 respectively. The average for the last ten years is 14·1. The percentage of deaths to notified cases is 21·7, against 17·4, 9·6, and 20·5 in the three preceding years respectively.

Diarrhœa and Dysentery caused 28 deaths during last year, exactly double the number of the previous year. The mean for the past ten years is 18·4. The fluctuations are mainly due to the climatic conditions during the summer and autumn months.

Respiratory Diseases.—Under this heading are included bronchitis, pneumonia, and pleurisy, which together total 286 deaths ; 101 are under 5 years of age and 185 over that period. The totals for the four previous years are 321, 297, 396, and 392 respectively.

Phthisis or Pulmonary Consumption caused in 1897, 124 deaths, against 135, 141, 185, and 161 in

the four preceding years respectively. 6 occurred under five years of age, and 118 of persons upwards. Among the other causes of death in 1897, 5 were referred to rheumatic fever, three to erysipelas, and 147 to heart disease. This last is an increase of 8 on the previous year, the average for the four years, 1893-6, being 154.

The deaths referred to different forms of violence within the Borough are 46, against 39, 39, 38, and 42 in the four preceding years respectively. These 46 deaths are equal to 2·9 per cent. of the total deaths from all causes, and to a rate of 0·48 per 1000 of the population.

The increase in deaths from different forms of violence is caused entirely by the number of persons who have drowned themselves during the year, chiefly in the canal. See Table 7.

During the year 1897, 89 deaths were registered on the authority of the Coroner's certificate, being inquest cases. These are equal to 5·2 per cent. of the total deaths, against 5·3 and 5·2 in preceding two years.

The causes of 39 deaths in Halifax last year were not certified by a registered Medical Practitioner or by the Borough Coroner. The proportion of uncertified deaths is equal to 2·4 per cent. of the total deaths, against 4·5, 2·0, and 1·7 in the preceding three years. The rate for the 33 large towns is 1·3.

Influenza.—During the year under notice, 13 deaths were registered from this disease, against 10, 19, 15, 22 and 37 in the five previous years. By a reference to Table A it will be seen that the deaths are distributed pretty evenly over the Borough. Of the total of 13, 10 deaths occurred of persons between the ages of 25 and 60, and 3 of persons over 60.

The Borough Infectious Diseases Hospital.—

On reference to Table 5 it will be found that at the commencement of the year the Fever Hospital contained 14 patients, 4 of typhoid fever, 9 scarlet fever, and 1 other, and that during the year 32 typhoid fever, 237 scarlet fever, and 3 others, making a total of 272 having been admitted. The total deaths numbered 16, and 49 remained in the Hospital at the close of the year.

The death-rate per cent. of the patients admitted during the year is 5·8, against 14·8 and 8·5 in the two preceding years, and against 12·5 from all causes to whole number of cases admitted since the opening, 25 years ago. A comparison of the above figures with previous years show that the Fever Hospital is yearly growing, both in importance and in favour, and in fact has at last proved its indispensibility as one of the settled institutions of the Borough.

The epidemic of scarlet fever during the latter half of the year, amounting to 476 cases, have been too many for the resources of the Hospital, and only about one-half of them have been admitted. This, of course, has placed the town at a great disadvantage in having so many scarlet fever patients at their homes, where, with all care, they are more likely to spread the disease than if they were in the Hospital. Toward the end of the year, to meet the increasing demand, the Committee decided to build Kitchen, Bathrooms and other accessories to the large Wards which were built to cope with the small-pox epidemic in 1893 and 4 (which have since remained empty), and thus provide accommodation for some 30 additional patients. The extra room and other facilities for nursing and bathing thus secured will materially help the nurses in their arduous labours.

The conversion, however, of the former Small-pox Wards into Fever Wards deprived us of any provision for small-pox should it unfortunately break out. This unprepared condition did not commend itself to the Committee, who, besides having decided to build a commodious Hospital on the 65 acres of upland, have also rented temporary premises in the country for use during the erection of the Hospital at Harewood Well Moor, so that we may consider ourselves prepared for any emergency.

Numerous changes have taken place in the Nursing Staff during the year. With the exception of one nurse, their health has been good. The increase in the number of patients has necessitated a corresponding increase in the number of the Staff, which now consists of eight fully trained nurses, six servants, porter, and disinfecter, in addition to the matron (Miss Robison) whose services you have shown your appreciation of in a marked manner during the year.

For a number of years the spiritual needs of the patients have been generously attended to by the Rev. W. L. Stock, Curate-in-charge of the Caddy Field Mission, and also by Mr. Hartley, one of the Town Missionaries. To both these gentlemen the thanks of the Committee are due for their gratuitous and much appreciated services.

Water Supply. — In my last Report I called attention to a Congress of the German Society of Public Health at which the question of water supply came prominently before them, when it was urged that a periodical and frequent examination, both chemical and bacteriological, should be made of the water supplied. Since then a most serious object-lesson has occurred a great deal nearer home and compelled the attention of

all Sanitary Authorities to their sources of public water supply. The Waterworks Committee have asked me to undertake an inspection of the various water sheds of the Borough; but until I have less work at the Fever Hospital I do not see any immediate prospect of doing so. In the meantime, the Borough Analyst is to be called upon to make more frequent analyses of samples from the chief sources of supply, which, considering the extent of cultivated and manured land around the reservoirs, cannot be regarded as absolutely free from suspicion.

Excreta Removal.—Under this head, in my Report for 1896, I discussed the three main systems in operation in the Borough, so that I need not go into details again; but I should like to remind you that after much enquiry and visiting of other towns, you decided to make a trial of the “Slop-water System” for certain kinds of property. It is very much to be regretted that other Committees have objected to this method and so retarded its introduction, but I most seriously urge its claims upon you, and hope very soon to see its adoption in suitable places. Dr. Parsons, a Local Government Board Inspector, after a careful enquiry into the merits of the system, recommends its adoption.

Meteorology, Lung Complaints & Smoke.—Ever since the causes of death have been tabulated in Halifax those from the lungs have been shown to be a larger proportion of the total deaths in comparison with those of other towns. The remarks of Mr. Whiteley at the foot of his meteorological report may throw some light on this phenomena. He says:—“These figures show that during the last 12 months the weather in Halifax has been colder and more damp, with higher rainfall and more rainy days than on the average in

places near the same latitude ; as also that Halifax has had less sunshine than the others." The exact figures will show to what extent this is true. The rainfall at Huddersfield was 33·02, Bradford 32·37, Leeds 25·49, and Halifax 34·04 inches. Compared with Leeds, Halifax has a very considerable excess of rain, and when one adds to this the very much lower temperature and a constantly smoke-laden atmosphere, one obtains the most perfect conditions for the production of those diseases of the respiratory organs which are so common in our midst. One could scarcely suggest that we should alter our geographical position, but the smoke, the most important factor of all, is within our control, or ought to be, and I have no hesitation in saying, that if we had less, the respiratory death-rate would be diminished. Not only does smoke aggravate such diseases as bronchitis by its irritant particles of carbon and sulphurous acid, but as has been recently shown, intercepts or modifies those rays of the sun which destroy injurious micro-organisms, and vitalises all that is healthy and good.

Following my report are those of the Chief Sanitary Inspector and also of the Borough Analyst, showing in both cases a large amount of work done in the promotion of the health of the town.

I have again to thank Mr. Harry Wilson, Clerk in the Office, for very valuable help in compiling the Tables ; Mr. Whiteley for meteorological information, and the Committee for its continued and generous help.

I am, Gentlemen,

Your obedient Servant,

D. AINLEY,

Medical Officer of Health.

GENERAL SUMMARY OF METEOROLOGICAL OBSERVATIONS TAKEN AT THE PUBLIC LIBRARY, BELLE VUE, FROM JANUARY 1st, 1897, TO DECEMBER 31st 1897,
 BY J. WHITELEY, BOROUGH LIBRARIAN.
 LATITUDE OF STATION = 53° 43' N. LONGITUDE = 1° 52' W. HEIGHT ABOVE SEA LEVEL, 625 FEET.

1897.	Pressure of Atmosphere in Month.		Temperature of Air in Month.						Mean Temperature.		Vapour.			Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Thermometer.		Wind.				Mean amount of Cloud.	Rain.		REMARKS.	
Month.	Mean.	Range.	Highest.	Lowest.	Range.	Mean.			Air.	Dew Points.	Elastic Force.	In a cubic foot of Air.				Maximum in Rays of the Sun.	Minimum on Grass.	Estimated Strength.	Relative proportion of				No. of days it fell.	Amount Collected.		
						Of all Highest.	Of all Lowest.	Daily Range.				Mean.	Short of Saturation						N.	E.	S.	W.				
	ins.	ins.	o	o	o	o	o	o	o	o	ins.	grs.	grs.		grs.	o	o							ins.		
January	... 29.249	1.144	56.1	21.4	34.7	35.2	30.2	5.0	33.0	31.2	.175	2.1	0.1	93	550	46.9	26.0	0.5	14	6	4	7	7.0	16	2.25	The observations have been reduced to mean values by Glaisher's Barometrical & Diurnal Range Tables, and the Hygrometrical results have been deduced from the seventh edition of Hygrometrical Tables, after corrections for Index errors of the Instruments employed.
February	... 29.348	1.286	57.0	24.2	32.8	43.8	36.4	7.4	39.8	36.4	.215	2.5	0.4	88	544	56.2	33.3	0.6	4	4	6	14	9.1	16	3.17	
March	... 28.891	1.336	55.8	21.6	34.2	46.6	36.9	9.7	40.9	35.5	.208	2.5	0.6	82	535	74.3	33.8	0.9	2	3	11	15	7.5	25	4.20	
April	... 29.164	0.998	59.4	24.1	35.3	48.3	36.2	12.1	41.0	37.8	.227	2.6	0.4	89	540	82.8	32.5	0.6	5	11	6	8	7.1	17	2.50	
May	... 29.274	1.152	64.0	31.8	32.2	55.3	41.4	13.9	46.8	38.1	.229	2.7	1.0	72	535	98.7	34.2	0.6	10	5	5	11	6.0	14	1.54	
June	... 29.347	0.980	78.5	40.3	38.2	63.4	50.2	13.2	54.9	48.8	.345	3.9	0.9	79	528	98.2	52.3	0.7	6	7	7	10	8.4	13	3.01	
July	... 29.332	0.746	76.0	44.1	31.9	66.8	51.6	15.2	57.7	49.7	.357	4.0	1.4	75	524	111.7	44.1	0.6	7	5	4	15	6.6	8	0.74	
August	... 29.208	0.830	81.5	48.5	33.0	66.3	52.7	13.6	58.3	49.1	.351	3.9	1.5	72	522	107.4	44.5	0.6	2	8	8	13	6.3	22	2.67	
September	... 29.279	1.220	65.2	38.4	26.8	58.1	46.3	11.8	51.1	44.8	.298	3.4	0.8	79	521	90.3	39.3	0.7	10	4	4	12	7.6	17	3.35	
October	... 29.482	1.254	63.8	34.6	29.2	53.1	43.0	10.1	47.2	43.0	.277	3.2	0.5	87	538	72.7	...	0.4	6	8	5	12	7.5	9	1.77	
November	... 29.512	1.314	56.0	30.8	25.2	48.1	41.0	7.1	44.3	41.3	.259	2.9	0.4	89	542	53.9	36.5	0.6	5	11	5	9	8.8	18	3.85	
December	... 29.129	1.708	57.0	23.5	33.5	44.6	35.3	9.3	40.1	36.0	.212	2.4	0.5	86	540	50.6	31.2	0.8	4	7	11	9	8.2	19	3.84	
Annual Means	29.268	1.164	64.2	31.9	32.3	52.5	41.8	10.7	46.3	41.0	.263	3.0	0.7	83	535	78.6	34.0	0.6	6	7	6	11	7.5	194	32.89	
Annual Means between Latitudes 53° and 54° N.	29.644	...	72.4	28.2	44.2	54.6	40.1	14.5	48.0	39.5	.272	3.1	0.8	79	540	88.1	37.5	1.0	6	8	8	11	6.2	187	29.72	

NOTE.—The Annual Means give the Averages for the Twelve Months. The next lower line of numbers gives similar Averages for Stations between the 53rd and 54th Parallels of Latitude, between which Halifax lies; these numbers have been adapted from those given by Mr. Glaisher in his Meteorological Reports, published in the Registrar-General's Quarterly Returns. These figures show that during the last twelve months the weather in Halifax has been colder and more damp, with higher rainfall and more rainy days than, on the average, in places near the same latitude; as also that Halifax has had less sunshine than the others.

TABLE I.—POPULATION, BIRTHS, DEATHS, AND INFANT MORTALITY IN THE
BOROUGH OF HALIFAX, 1880-1897.

Years.	Population.	Births.	Deaths.	Rate per 1000 living.		Deaths of Infants under One Year to 1000 Births.
				Births.	Deaths.	
1880	..	2454	1632	33.6	22.4	156
1881	...	2338	1589	31.7	21.5	155
1882	...	2247	1519	30.1	20.3	167
1883	...	2162	1491	28.6	19.7	150
1884	...	2262	1786	29.6	23.4	180
1885	...	2231	1508	28.9	19.5	133
1886	...	2255	1775	28.8	22.7	173
1887	...	2249	1660	28.4	21.0	149
1888	...	2282	1571	28.2	19.6	154
1889	...	2192	1667	25.7	20.6	176
1890	...	2277	1827	27.8	22.3	173
1891	...	2160	1877	26.0	22.6	172
1892	...	2169	1642	25.8	19.5	163
1893	...	2254	1591	24.5	17.2	174
1894	...	2128	1522	22.9	16.3	135
1895	...	2186	1803	23.3	19.2	158
1896	...	2329	1667	24.4	17.4	150
1897	...	2147	1570	22.4	16.3	140

TABLE 2.—DEATH RATES IN GROUPS OF AGES IN THE BOROUGH OF HALIFAX,
1880-97.

Years.		Death-Rate per 1000 living in each group.					
		All Ages.	0-5.	5-15.	15-25.	25-60.	60 and upwards.
1880	...	22·4	70·3	...	...	...	72·9
1881	...	21·5	68·0	...	...	...	77·5
1882	...	20·3	62·9	4·3	7·0	13·7	74·2
1883	...	19·7	49·6	5·1	5·7	14·0	90·1
1884	...	23·4	70·0	5·2	5·3	16·3	85·5
1885	...	19·5	50·3	4·9	5·2	14·7	83·3
1886	...	22·7	68·5	5·3	6·0	14·9	92·4
1887	...	21·0	54·8	4·0	6·0	16·2	88·2
1888	...	19·6	55·4	3·6	3·9	13·0	93·8
1889	...	20·6	59·7	3·5	4·6	15·3	84·2
1890	...	22·3	59·1	4·3	6·0	17·5	94·3
1891	...	22·6	63·3	4·2	5·6	16·4	96·6
1892	...	19·5	54·0	3·9	4·4	13·6	89·2
1893	...	17·2	62·0	2·1	3·0	10·7	75·6
1894	...	16·3	50·7	2·6	4·8	14·5	74·9
1895	...	19·2	56·5	2·1	5·8	17·3	92·9
1896	...	17·5	55·9	1·8	4·4	15·6	85·6
1897	...	16·3	52·3	2·1	4·4	15·0	77·4

TABLE 3.—SHOWING DEATHS FROM ZYMOTIC DISEASES IN THE BOROUGH OF HALIFAX,
1880-1897.

Years.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria	Whooping Cough.	Typhus.	Enteric Fever.	Ill- Defined Fever.	Diarrhoea and Dysentery.	Principal Zymotic Diseases.	Death-rate per 1000 living from these Diseases.
1880	...	15	44	4	10	...	19	...	22	114	1.56
1881	6	6	102	4	17	...	21	...	6	162	2.19
1882	...	11	21	2	11	1	22	...	25	93	1.24
1883	...	1	9	3	7	1	26	5	8	60	0.79
1884	...	57	28	3	33	1	22	2	38	184	2.41
1885	1	...	32	7	12	1	12	2	20	87	1.13
1886	...	85	9	16	11	1	13	2	38	175	2.22
1887	...	14	33	6	11	...	12	...	23	99	1.24
1888	1	10	21	3	35	...	9	1	14	94	1.16
1889	1	70	7	7	2	...	22	3	16	128	1.58
1890	...	25	24	12	15	1	13	1	13	104	1.27
1891	...	39	36	2	58	...	22	...	2	159	1.91
1892	19	64	7	14	9	...	7	...	7	127	1.51
1893	33	5	3	18	32	...	12	...	38	141	1.70
1894	4	32	4	11	21	...	5	...	4	81	0.9
1895	...	9	6	12	24	...	17	...	53	121	1.29
1896	...	15	...	16	33	...	22	...	14	100	1.05
1897	...	47	22	7	12	...	17	...	28	133	1.37

TABLE 4.—SHOWING WHETHER MOTHERS OF CHILDREN
WHO HAVE DIED UNDER FIVE YEARS OF AGE
IN 1897 WORK OUT OR ARE ENGAGED AT
HOME.

WARDS.			At Home.	Work Out.
OVENDEN	...	...	44	...
NORTHOWRAM	...	...	37	3
NORTH	...	...	32	9
CENTRAL	...	..	45	3
WEST	...	...	42	1
SOUTH	...	...	28	...
EAST	...	...	37	3
SOUTHOWRAM	...	..	52	4
SKIRCOAT	...	...	25	...
PELLON	..	...	31	3
KINGSTON	..	...	27	1
ILLINGWORTH	...	...	26	...
WORKHOUSE	...	...	1	3
INFIRMARY	.	...	1	1
HOSPITAL	...	...	4	...
Total	...	...	*432	31
„ 1896	...	...	445	37
„ 1895	...	...	454	41
„ 1894	...	...	418	42

* The particulars of 27 deaths, in addition to the above, were not given.

This Table is made year by year to meet the allegations of those who say that the deaths of young children in manufacturing towns are due to the working out of the mothers.

TABLE 5.—SHOWING THE NUMBER OF CASES ADMITTED
INTO THE BOROUGH INFECTIOUS DISEASES
HOSPITALS DURING THE YEAR 1897.

	Small-pox.	Typhoid.	Scarlatina.	Others.	Total.
Cases remaining in Hospital January 1st, 1897 ...	...	4	9	1	14
Cases admitted during the year	...	32	237	3	272
Total ..	...	36	246	4	286
Recoveries ...	...	32	234	4	270
Deaths ...	...	4	12	...	16
Cases remaining in Hospital December 31st, 1897 ...	...	4	45	...	49

TABLE 6.—SHOWING THE NUMBER OF CASES ADMITTED
SINCE OPENING, AND TOTAL DEATHS AND
RATE PER CENT.

	Small-pox.	Typhus.	Typhoid.	Fever.	Scarlatina.	Others.	Total.
Number of Cases admitted since the opening ...	682	29	615	62	778	134	2300
Number of Deaths since the opening ...	71	14	128	8	54	13	288

Percentage of Deaths from all causes to whole number
of Cases admitted since the opening ... 12.52.

TABLE 7.—DEATHS FROM SEVERAL CAUSES AT SIX GROUPS OF AGES,
FOR THE YEAR ENDING JANUARY 1ST, 1898.

	All Ages.	Under 5 years.		5-15.	15-25.	15-60.	60 and upwards.
		0-1.	1-5.				
Small-pox	...	...	...	...	...	...	...
Measles	48	6	40	2	...	...	...
Scarlet Fever	22	1	8	10	1	2	...
Diphtheria	9	2	4	2	1	...	...
Whooping Cough	12	7	5	...	...	...	...
Typhus	...	...	...	...	...	...	...
Enteric Fever	16	...	1	1	5	8	1
Simple and undefined Fever	...	...	...	...	...	...	...
Diarrhœa, Dysentery	28	21	4	...	...	1	2
Simple Cholera	...	...	...	...	...	...	...
Venereal Affections	1	1	...	...	...	...	...
Erysipelas	3	2	...	...	...	...	1
Pyæmia, Septicœmia	2	...	...	...	...	2	...
Puerperal Fever	1	...	...	...	...	1	...
Parasitic Diseases—Thrush	...	...	...	...	...	...	...
Dietetic Diseases—Starvation	...	...	...	...	...	...	...
Dietetic Diseases—Alcoholism, Del. Trem.	4	...	...	...	...	3	1
Rheumatic Fever, Rheumatism of Heart	2	...	...	...	...	2	...
Rheumatism	13	...	...	1	...	7	5
Rickets	2	...	2	...	...	...	...
Cancer, Sarcoma, &c.	58	...	...	...	...	37	21
Tabes Mesenterica, Marasmus, &c.	62	36	6	4	...	1	15
Tubercular Meningitis	35	6	18	4	2	5	...
Phthisis	121	...	3	7	23	80	8
Scrofula, Tuberculosis	15	2	4	1	3	5	...
Other Constitutional Diseases	34	12	2	3	1	12	4
Premature Birth	50	50	...	...	...	...	...

TABLE 8.—SHOWING INQUESTS IN THE BOROUGH DURING THE YEAR 1897.

Verdicts.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Accidental Deaths	1	4	5	2	3	1	1	2	1	5	3	4	32
Natural Causes	6	2	1	2	3	4	4	...	2	3	1	7	35
Found Drowned	...	...	...	...	...	...	...	...	...	...	...	...	...
Suicide by various means	...	2	...	2	2	...	2	1	1	2	2	4	18
Other Verdicts	...	...	1	...	1	...	...	...	...	...	...	1	3
Murder	1	...	...	...	...	...	...	...	...	...	...	...	1
Total 1897	8	8	7	6	9	5	7	3	4	10	6	16	89
" 1896	6	7	12	4	6	8	5	9	5	6	5	15	88
" 1895	12	9	6	8	9	7	9	6	6	8	9	7	96
" 1894	13	7	7	6	2	6	10	4	3	6	3	11	78
" 1893	7	2	5	4	5	6	2	3	3	3	10	6	56
" 1892	3	1	11	10	4	7	6	6	6	3	6	6	69
" 1891	3	8	3	4	6	1	6	6	1	3	2	3	46
" 1890	4	8	7	3	3	4	4	8	3	3	3	6	56
" 1889	3	4	5	6	5	5	7	2	5	1	6	3	52
" 1888	3	6	2	1	5	8	3	3	2	3	1	2	39
" 1887	5	3	4	3	3	4	3	2	3	3	3	2	38
" 1886	1	...	7	5	5	7	6	...	4	4	2	1	43
" 1885	6	6	4	8	4	3	5	3	3	5	3	3	53
" 1884	...	6	5	8	8	10	6	5	5	6	9	5	73
" 1883	2	2	...	4	4	5	3	7	6	1	8	4	46

TABLE 9.—SHOWING THE NUMBER OF ZYMOTIC DISEASES NOTIFIED BY MEDICAL PRACTITIONERS IN EACH WARD OF THE BOROUGH, FOR THE YEAR ENDING DEC. 31ST, 1897, AND THE RATE PER CENT. OF POPULATION AND THE COMPARISON WITH THE SIX PREVIOUS YEARS.

	Small-pox.	Cholera.	Typhus Fever.	Enteric Fever.	Scarlet Fever.	Continued Fever.	Puerperal Fever.	Diphtheria.	Relapsed Fever.	Total.	Rate per centage of Population.
OVENDEN ...	...	...	...	6	21	...	1	13	...	41	0·59
NORTHOWRAM...	...	...	..	11	28	...	2	1	...	42	0·60
NORTH ...	...	...	...	9	35	1	1	...	...	46	0·58
CENTRAL ..	..	...	...	6	14	...	...	2	...	22	0·24
WEST ...	...	...	...	7	37	...	1	8	...	53	0·59
SOUTH ...	...	...	...	5	28	...	...	1	...	34	0·39
EAST ...	...	...	...	9	12	...	...	9	...	30	0·34
SOUTHOWRAM ...	...	...	...	4	50	...	...	3	...	57	0·76
SKIRCOAT ...	..	..	..	6	145	...	...	1	...	152	1·95
PELLON ...	...	.	..	4	20	...	2	18	...	44	0·56
KINGSTON ...	...	...	..	3	44	...	...	3	...	50	0·61
ILLINGWORTH ...	...	...	...	8	42	...	1	8	...	59	0·81
Total, 1897 ...	...	...	...	78	476	1	8	67	...	630	0·66
„ 1896 ...	...	..	...	105	44	2	4	37	...	192	0·20
„ 1895 ...	...	...	...	58	52	3	4	29	...	146	0·15
„ 1894 ...	16	...	..	52	114	3	6	43	...	234	
„ 1893 ...	346	5	...	69	150	5	6	57	...	638	
„ 1892 ...	159	..	1	56	256	9	4	71	2	558	
„ 1891 ...	...	1	..	99	429	14	5	23	2	573	
PUBLIC INSTITUTIONS.											
ROYAL INFIRMARY .	...	...	...	...	1	...	...	...	..	1	
WORKHOUSE ...	...	..	...	.	4	..	...	..	...	4	

TABLE 10.—DEATHS OCCURRING WITHIN THE BOROUGH
AMONG PERSONS NOT BELONGING THERETO.

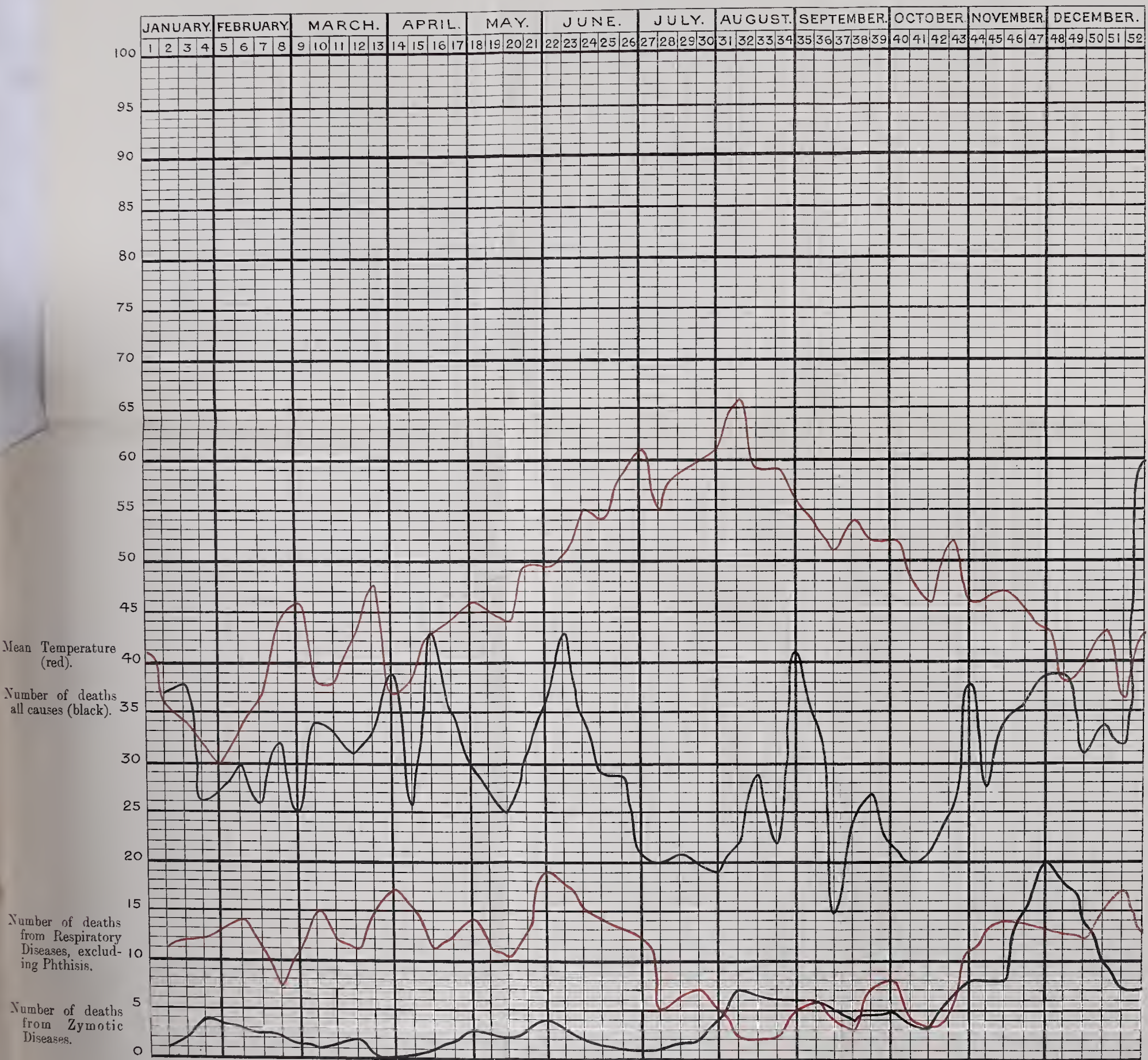
The following are included in the Infirmary :—				
TODMORDEN	...	...	...	2
SOWERBY BRIDGE	...	...	...	5
HIPPERHOLME	...	..	...	2
QUEENSBURY	...	...	..	1
WARLEY	...	...	...	1
NORTHOWRAM	...	...	...	3
LUDDENDEN	...	...	...	2
SOWERBY	...	...	...	2
WADSWORTH	...	...	...	2
BRIGHOUSE	...	...	...	1
NORLAND	...	..	...	2
AMBLER THORN	..	...	...	1
HEPTONSTALL	...	...	...	1
FEATHERSTONE	...	...	...	1
RISHWORTH	...	...	...	1
RIPPONDEN	...	...	..	1
MYTHOLMROYD	...	...	..	1
ELLAND	...	.	...	1
STAINLAND	...	...	...	1
SOYLAND	...	...	...	1
Total	...	...	...	32
The following is included in South Ward, having died in the Home for Incurables, West Grove.				
QUEENSBURY	...	..	...	1

TABLE 10.—SHOWING RATES OF MORTALITY OF CHILDREN UNDER ONE YEAR OF AGE FROM CHIEF INFANTILE DISEASES PER THOUSAND BIRTHS, AND RATE PER CENT. OF TOTAL DEATHS.

DISEASES.	Total Deaths.		Rate per 1000 Births.		Rate per cent. of total Deaths at all ages.	
	1897.	1896.	1897.	1896.	1897.	1896.
From all causes	301	351	140·1	150·7	19·1	21·0
Lung Diseases	55	85	25·6	36·4	3·4	5·0
Marasmus, Wasting Diseases ...	36	42	16·7	18·0	2·2	2·5
Premature Birth, Inanition ...	50	68	23·2	29·1	3·1	4·0
Diarrhœa	21	12	9·7	5·1	1·3	0·7
Whooping Cough	7	15	3·2	6·4	0·4	0·8
Convulsions	59	68	27·4	29·1	3·7	4·0
Scrofula, Tuberculosis	2	5	0·9	2·1	0·1	0·2
Dentition	12	9	5·5	3·8	0·7	0·5

TABLE 11.—SHOWING DEATH-RATES PER THOUSAND OF THE POPULATION IN EACH
QUARTER FOR THE FOLLOWING DISEASES.

	Zymotic Diseases.		Consumption.		Lung Diseases, including Consumption.		From all Causes.	
	1897.	1896.	1897.	1896.	1897.	1896.	1897.	1896.
1st Quarter	...	0·5	0·8	1·3	1·5	5·0	4·8	19·6
2nd "	...	0·5	1·3	1·4	1·4	4·9	4·9	17·1
3rd "	...	1·6	0·7	1·2	1·8	2·6	1·8	14·6
4th "	...	2·7	1·2	1·0	1·9	4·5	4·9	18·9
Whole Year	...	1·3	1·0	1·2	1·6	4·2	4·1	17·5



(A)

TABLE OF DEATHS IN THE BOROUGH OF HALIFAX SANITARY DISTRICT CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES, AND SHOWING ALSO THE POPULATION OF SUCH LOCALITIES, AND THE BIRTHS THEREIN DURING THE 52 WEEKS ENDING JANUARY 1ST, 1898.

NAMES of LOCALITIES adopted for the purposes of these Statistics; Public Institu- tions being shewn as sepa- rate Localities.	Population at all ages, at the middle of 1897.	BIRTHS—3.					MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																					
		SEX.		Total.	Illegitimate.	Birth-Rate per 1000 per annum	At all Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.	11	12 Small-pox.	13 Measles.	14 Scarlatina.	15 Diphtheria.	16 Croup (not Spasmodic).	17 Whooping Cough.	Continued Fevers.										34 Total.	35 Death Rate per 1000 per annum.			
		Males.	Females.																		18 Typhus.	19 Enteric or Typhoid.	20 Other or Doubtful.	21 Diarrhea and Dysentery.	22 Cholera.	23 Rheumatic Fever.	24 Erysipelas.	25 Pyæmia.	26 Puerperal Fever.	27 Ague.			28 Phthisis.	29 Bronchitis, Pneumonia, and Pleurisy.	30 Heart Disease.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Ovenden Ward ...	6925	102	78	180	225·9	98	25	21	2	4	22	24	Under 5 5 upwards	...	9	...	1	...	2	...	...	...	1	...	...	...	...	9	...	...	...	23	46		
Northowram Ward ...	6926	98	108	206	429·7	105	33	12	4	5	19	32	Under 5 5 upwards	...	1	...	1	...	...	...	...	5	...	...	...	...	1	5	...	...	...	32	45		
North Ward ...	7829	106	106	212	1527·0	122	37	10	4	8	35	28	Under 5 5 upwards	...	...	...	...	...	2	...	...	...	4	...	...	...	1	13	...	...	...	27	47		
Central Ward ...	8875	97	99	196	122·0	141	26	23	7	7	43	35	Under 5 5 upwards	...	7	...	...	...	2	...	...	1	...	1	...	...	9	21	7	1	...	34	75		
West Ward ...	9628	88	87	175	319·9	122	22	21	1	6	37	35	Under 5 5 upwards	...	2	...	...	...	1	...	...	2	...	...	...	...	2	9	1	...	...	26	43		
South Ward ...	8569	78	62	140	216·3	131	19	13	3	2	35	59	Under 5 5 upwards	...	2	1	...	...	1	...	...	1	...	...	...	...	10	11	16	1	1	39	79		
East Ward ...	8586	71	59	130	315·1	118	23	18	5	4	44	24	Under 5 5 upwards	...	10	...	1	...	...	...	2	...	...	1	1	...	6	12	15	1	...	60	99		
Southowram Ward ...	7468	118	88	206	227·5	121	32	26	2	8	27	26	Under 5 5 upwards	...	10	2	1	...	...	...	...	4	...	...	...	...	7	13	13	...	1	40	77		
Skircoat Ward ...	7819	75	88	163	120·8	94	19	8	5	3	23	36	Under 5 5 upwards	...	...	2	...	...	...	...	1	...	2	...	...	...	...	8	...	...	...	14	27		
Pellon Ward ...	7758	92	102	194	225·0	94	24	11	3	2	28	26	Under 5 5 upwards	...	1	...	...	...	1	...	1	...	2	...	...	...	1	9	...	...	...	20	35		
Kingston Ward ...	8138	93	94	187	322·9	92	20	9	2	6	27	28	Under 5 5 upwards	...	...	...	...	1	2	...	...	1	...	...	...	...	8	13	4	...	1	32	59		
Illingworth Ward ...	7226	70	71	141	119·5	112	16	11	5	8	30	42	Under 5 5 upwards	...	2	1	1	...	1	...	...	1	...	...	1	...	...	5	...	...	...	15	27		
Workhouse ...	...	8	9	17	5	...	121	3	..	1	1	56	60	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	1	13	20	10	1	1	37	85		
Infirmary ...	...	...	...	...	...	...	83	1	3	10	7	49	13	Under 5 5 upwards	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...	2	2	53	118	
Borough Hospital ...	...	...	...	...	...	...	16	1	3	6	2	4	...	Under 5 5 upwards	...	...	3	...	...	...	...	...	...	...	...	...	4	1	8	...	16	47	79		
TOTAL ...	95747	1096	1051	2147	4422·4	1570	301	189	60	73	479	468	Under 5 5 upwards	..	44	9	5	1	12	...	2	...	25	..	...	2	...	...	...	6	101	1	...	2280	490
Deaths occurring outside the Division or District among persons belonging thereto						28	...	...	...	2	16	10	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	3	5	...	2	14	28	...
Deaths occurring within the Division or District among persons not belonging thereto						33	1	1	3	4	21	3	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	9	19	31	...

TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH,
DURING THE 52 WEEKS ENDING JANUARY 1st, 1898. IN THE COUNTY BOROUGH OF HALIFAX; CLASSIFIED ACCORDING TO
(B) DISEASES, AGES AND LOCALITIES.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a.)	POPULATION AT ALL AGES.		Registered Births. (d.)	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.													NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.															
	Last Census, 1891. (b.)	Estimated to middle of 1897. (c.)		Small pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipelas.				Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipelas.				
								Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.										Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.						
				1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Ovenden Ward	...	6469	6925	180	...	21	13	...	...	6	...	...	1	...	...	..	...	...	12	...	...	...	4	...	...	...	...	...	...	..		
Northowram Ward	...	6463	6926	206	...	28	1	...	...	11	..	...	2	...	...	...	...	...	14	...	...	...	2	...	...	...	...	...	...	...		
North Ward	...	7416	7829	212	...	35	...	...	...	9	1	...	1	...	...	...	...	...	27	...	...	...	3	1	...	...	...	...	...	...		
Central Ward	...	8658	8875	196	...	14	2	...	...	6	...	..	...	...	...	...	...	...	5	...	...	...	3	...	...	...	...	...	...	...		
West Ward	...	9017	9628	175	...	37	8	...	...	7	...	...	1	...	...	...	..	...	23	...	...	...	2	...	...	...	...	...	...	...		
South Ward	...	8085	8569	140	...	28	1	...	...	5	...	...	...	...	...	..	...	...	14	...	...	...	1	...	...	...	..	...	...	...		
East Ward	...	8417	8586	130	...	12	9	...	...	9	...	...	...	..	...	...	...	...	8	...	...	...	4	...	...	...	...	...	...	...		
Southowram Ward (H)	...	7042	7468	206	...	50	3	...	...	4	...	...	...	...	...	...	...	...	23	2	...	...	...	...	..	...	...	...	...	...		
Skircoat Ward	...	7232	7819	163	...	145	1	...	...	6	...	...	...	...	...	...	...	...	36	...	...	...	3	..	...	..	...	...	...	...		
Pellon Ward	...	7332	7758	194	...	20	18	...	...	4	...	...	2	...	...	...	...	...	10	...	...	...	1	...	...	...	...	...	...	...		
Kingston Ward	...	6732	8138	187	...	44	3	...	...	3	...	...	...	...	...	...	...	...	17	...	...	...	1	...	...	...	...	...	...	...		
Illingworth Ward	...	6969	7226	141	...	42	8	...	...	8	...	...	1	...	...	...	...	...	25	...	...	...	7	...	...	...	...	...	...	...		
Workhouse	...	...	...	17	...	4	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...		
Infirmery	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...		
Borough Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
TOTALS	...	89832	95747	2147	...	481	67	...	...	78	1	...	8	...	...	..	...	...	219	2	...	...	31	1	...	...	...	...	...	...		

The Notification of Infectious Diseases has been compulsory since 1882.
The Borough Fever Hospital is marked (H), and is situate in Southowram Ward.

County Borough of Halifax.

THE
Sanitary Inspector's Report

FOR THE
Year ending 31st December, 1897.

*To the Chairman and Members of the Health
Committee.*

GENTLEMEN,

I have the pleasure to submit for your consideration my Twenty-third Annual Report on the operations of the Health Department for the year ending December 31st, 1897.

TOWN HALL, HALIFAX,

January, 1898.

HEALTH DEPARTMENT.

Summary of Work done.

Total number of Visits made by the District Inspectors...	31244
Total number of Visits to Houses	10671
Number of Visits to Houses with reference to Defective Drainage	2900
Number of Visits to Houses with reference to Cleanliness, Overcrowding, &c.	624
Number of Visits to Houses with reference to Infectious Diseases	2524
Rooms Disinfected	1215
Cases removed to the Hospital	274
Infectious Diseases reported	631
Nuisances reported	3264
Nuisances abated... ..	3302
Notices served	1064
Letters served (referring to Nuisances, &c.)	311
Summonses taken out	5
Smoke Observations taken	760
Old Ashpits abolished	3
Old Ashpits altered to Goux System... ..	27
Goux Closets registered	299

It must be remembered that many nuisances are frequently included under one notice, and therefore the number of nuisances represent considerably more than the number of notices.

Removal of Nuisances.

At the commencement of the year 392 complaints remained on the books and in course of removal, since then 3264 have been registered and 3302 removed, leaving at the close of the year 354 to be dealt with. The following Table shows the nature of nuisances registered.

Nature of Nuisances.				Number Registered.
Defective Sink Drains	...	...	...	96
„ „ Pipes	...	...	...	93
„ „ Syphon Traps...	...	...	...	120
„ Basement Drains	...	..	...	108
„ Yard Drains	...	..	...	127
„ Urinal Drains	...	...	...	4
„ W.C. Drains	...	..	...	92
„ Area Drains	...	...	..	54
„ Private Street Drains	...	...	..	9
Made-up Sink Pipes	..	..	...	88
„ Bath Pipes	...	...	...	1
„ Lavatory Pipes	...	...	...	2
„ Basement Drains	...	...	...	106
„ Water Closets	...	...	...	126
„ Yard Drains	...	...	...	88
„ Urinal Drains	...	..	...	12
„ Gullies ..	...	...	...	112
„ Private Street Drains	...	...	...	20

NUISANCES—*Continued.*

Nature of Nuisances.				Number Registered.
Untrapped Basement Drains				11
„	Sink Drains	...	...	35
„	Area Drains	.	...	8
„	Yard Drains	...	...	74
„	Urinal Drains	..	...	3
„	Bath Pipes	...	...	26
„	Lavatory Pipes	...	...	42
Drains not efficiently Trapped :—				
	Sink Drains	...	..	4
	Cellar Drains	...	..	6
	Area Drains	...	...	13
	Yard Drains	...	..	11
Sink Drains requiring Disconnecting				93
Defective Fall-pipe Drains ..				32
„	Fall-pipes	...	...	122
„	Spouting	...	.	143
„	Roofing	...	...	28
Broken Pot and Iron Traps ...				4
Insufficient Supply of Water to Closets ...				1
Nuisances from Water in Cellar				100
„	Want of Drains	...	...	44
„	Smoke	...	...	10
„	Poultry	...	...	6

NUISANCES—*Continued.*

Nature of Nuisances.	Number Registered.
Nuisances from Pigeons	2
,, Rabbits	3
,, Swine	4
Houses Overcrowded	36
,, Unfit for Habitation	2
,, requiring Limewashing	67
Accumulations of Offensive Matter	96
Privies requiring Limewashing	105
Ashpits requiring Re-construction	35
Insufficient Privy Accommodation	35
Offensive Ashpits and Privies	23
,, Goux Closets	48
,, Ash Tubs	85
Doors off Closets...	60
,, Ashes Tub Places	70
Dilapidated Closets	57
COWSHEDS.	
Want of Light, Room, Air Space, and Ventilation	28
Dilapidated Cowsheds and Floors	15
Cesspools requiring Emptying, and Defective	5
Offensive Middensteads	9
Cowsheds requiring Limewashing	132

NUISANCES—*Continued.*

Nature of Nuisances.				Number Registered.
FACTORIES AND WORKSHOPS.				
Rooms requiring Limewashing	...	...	...	50
Workrooms Overcrowded	...	.	...	1
Want of Ventilation	...	..	...	2
Miscellaneous	...	...	...	220
TOTAL	...	...	...	3264

The above lists do not include work carried out after mere verbal notice.

Night Scavenging.

The following Table shows the number of Ashpits cleansed during the year, and the number of loads of manure and rubbish collected.

Month.		Number of Ashpits Emptied.	Loads of Soil.	Loads of Rubbish.	Total Number of Loads.
January	...	372	49	126	175
February	...	196	74	67	141
March	...	503	121	316	437
April	...	177	48	82	130
May	...	474	71	183	254
June	...	462	58	220	278
July	...	358	57	119	176
August	...	356	76	117	193
September	...	410	107	147	254
October	...	279	70	65	135
November	...	377	79	153	232
December	...	380	58	184	242
TOTAL	...	4344	868	1779	2647

The total number of Ashpits cleansed during the year is 4344, as against 4727 in the previous year. 27 Ashpits with Privies have been altered to the Goux System, 3 abolished, and Ashes Tubs supplied in the place of 7 Dry Ashpits. The above includes Ovenden and Illingworth Wards.

TABLE SHOWING THE NUMBER OF ASHPITS WITHIN
THE BOROUGH, DECEMBER 31st, 1897.

The Borough is divided into six Districts, each District including two Wards.

District.	Wards.			Ashpits with Privies.	Dry Ashpits.
1	Northowram and North ..	...		61	53
2	Ovenden and Illingworth	...		436	29
3	Central and East	...	...	52	112
4	West and South	...	.	33	232
5	Skircoat and Southowram	...	...	65	47
6	Pellon and Kingston	...	...	9	41
	TOTAL	...	...	656	514

Goux Scavenging.

The following Table shows the number of Closet Tubs and Loads of Ashes collected during the year.

Month.				Number of Closet Tubs Collected.	Loads of Ashes Collected.
January	...	..	...	47614	1548
February	...	...	...	41360	1350
March	...	...	...	50038	1671
April	...	..	...	44840	1573
May	...	...	...	47494	1535
June	...	...	...	44448	1431
July	...	..	...	49540	1374
August	...	...	...	46388	1205
September	...	...	..	48361	1372
October	...	...	...	47549	1401
November	...	...	...	48388	1541
December	...	...	...	47186	1643
TOTAL ...				563206	17644

The above represents 26819 loads of Night Soil (each load containing 21 closet Tubs), as against 26549 and 17644 and 17314 loads of Ashes respectively for the preceding year.

The number of additional Closets registered is 299, being a decrease of 49 on the number registered during the year 1896.

Goux Scavenging.

The following Table shows the number of Goux Closet Tubs registered each year since the commencement of the Goux System.

Year.			Number of Closet Tubs.	Number Registered during each year.
1871	...	...	1109	1109 in 15 months
1872	...	...	1895	786
1873	...	...	2440	545
1874	...	...	2820	380
1875	...	...	3088	268
1876	...	...	3316	228
1877	...	...	3769	453
1878	...	...	4277	508
1879	...	...	4858	576
1880	...	...	5071	218
1881	...	...	5552	481
1882	...	...	6057	505
1883	...	..	6506	449
1884	...	...	7405	899
1885	...	...	8049	644
1886	...	...	8727	678
1887	...	...	9327	600
1888	...	...	9831	504
1889	...	...	10446	615
1890	...	...	11098	652
1891	...	..	11644	546
1892	...	...	12068	419
1893	...	...	13047	984
1894	...	...	13450	403
1895	...	...	13797	347
1896	...	...	14145	348
1897	...	..	14444	299

During the year 263 Closets have been erected in connection with new property, and 28 have been altered from the old system, 5 substituted for Water Closets, and 3 added where the accommodation was previously insufficient.

Birks Hall Tips.

Table showing the number of loads of Ashes and Rubbish tipped during the year.

Names.					Number of Loads.
Waterworks Department	..	...	...		80
Goux Department	...	...	...		18360
Markets Committee	...	...	...		30
Gasworks Department	...	...	...		1600
Private Firms	...	...	...	...	5413
TOTAL	...	...	...	...	26473

Mozley Tip.

Table showing the number of loads of Rubbish tipped during the year.

Name.					Number of Loads.
Goux Department	...	...	..		1339

Streets Scavenging.

Table showing number of Streets and Miles
requiring Sweeping in each Ward.

Wards.				Number of Streets.	Number of Lineal Miles of Setting.	
					Miles.	Yards.
East	...	...	...	89	7	114
Central	...	...	...	41	4	522
South	...	...	...	51	6	1015
West	...	...	...	39	5	848
North	...	...	...	33	4	1109
Northowram	..	...	...	23	3	1348
Southowram	...	...	...	37	6	1406
Skircoat	...	...	..	25	3	452
Kingston	...	..	...	8	1	714
Pellon	...	...	...	18	3	601
Ovenden and Illingworth	...	...	...	28	9	570
TOTAL				392	55	1659

Streets Scavenging.

Table showing number of Lineal Yards and Miles Swept during the year in each Ward.

Wards.				Number of Lineal Yards Swept.	Miles.	Yards.
East	...	...	...	2,651,680	1506	1120
Central	...	...	...	1,151,606	654	566
South	...	...	...	1,097,366	623	886
West	...	...	...	647,060	367	1140
North	...	...	...	522,620	296	1660
Northowram	...	...	...	315,528	179	488
Southowram	...	...	...	556,823	316	663
Skircoat	...	...	...	204,150	115	1750
Kingston	...	...	...	100,869	57	549
Pellon	...	...	...	321,888	182	1568
Ovenden	...	...	...	968,838	550	838
TOTAL				8,538,428	4851	668

Streets Scavenging.

The subjoined Table gives at a glance the work done in this Department.

	1897.
Number of Streets Swept	30,569
Area in Yards	57,558,040
Number of Streets Watered	10,045
Loads of Water used for that purpose ..	11,824
Loads of Sweepings gathered	6,522
Loads of Snow removed from the Streets ..	9,081
Number of Gullies emptied	176,664
Number of Street Drains flushed ..	684

During the year 420 loads of garbage have been removed from fishmongers, fried fish shops, and green-grocers.

THE FOLLOWING TABLE SHOWS THE AMOUNT OF WORK DONE IN THIS DEPARTMENT FROM
1883 TO 1887.

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Number of Streets swept ...	20878	22320	22457	20621	24234	25901	27149	28244	28869	27019	30700	29800	26921	32204	30569
Number of Streets watered ...	4141	5008	5814	3592	3858	4157	8620	5337	5404	8016	7822	5382	10055	9762	10045
Loads of Water used ...	5671	6561	7023	4798	5430	6255	12442	6877	6598	8057	8648	5969 ⁴	10965	11850	11824
Loads of Sweepings gathered ...	6247	5692	4546	4471	4855	4609	4574	6882	5102	4832	6571	5184	4926	5364	6522
Number of Gullies emptied ...	39422	87317	74080	68094	74512	76661	89852	100103	122611	120004	144019	153411	133784	175903	176664
Loads of Snow re-moved from the Streets ...	1274	617	...	29200	2843	8031	972	884	291	14564	8444	1215	14331	41	9081
Drains flushed ...	...	...	130	302	943	789	306	523	1278	1822	2211	1006	709	592	684

ANALYSIS OF REFUSE COLLECTED IN THE BOROUGH
OF HALIFAX DURING THE YEAR 1897.

				Number of Loads.
From Wet and Dry Ashpits	...	..		2,647
From Ashes Tubs	...	...	...	17,644
From Goux Closet Tubs	...	...	...	26,819
Sweepings gathered from the Streets, and Refuse from Gullies	...	...	...	6,522
Garbage removed from Market Hall	..	..		1,006
Horse Droppings from Streets	...	...	...	260
Garbage from Fried Fish Shops	...	...	...	420
Total Number of Loads	...	...	...	55,318

Smoke Observations.

The following Table shows the number of Smoke Observations taken during the year, and the average number of minutes of dense smoke emitted.

	Number of Observations taken.	Average Number of minutes of Dense Smoke emitted.
Number of Observations taken ...	760	
Number showing moderate Smoke or <i>nil</i>	} 255	
Number of Observations taken for a period of 60 minutes, each show- ing Dense Smoke	} 505	
Average number of minutes of Dense Smoke emitted from Chimneys ...	} ..	2.35

Smoke Observations.

The following Table shows the number of observations taken, names of firms, and number of boilers working.

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Akroyd J. & Sons ...	Haley Hill ...	5	1	nil
„ .	Bowling Dyke ..	3	8	0·7
Akroyd W. ..	Lucy Street ...	1	2	nil
Akroyd & Ambler ..	New Brunswick Street	1	5	3·0
Baldwin & Walker ...	West Croft Mill ...	2	2	2·5
Baldwin J. & J. ...	Clark Bridge ...	5	7	1·8
Balme & Pritchard ...	Lister Lane, stone chimney	2	2	1·5
„ ...	Lister Lane, brick chimney	2	3	2·0
Bancroft W. ...	Fenton Estate ...	2	3	3·3
Bancroft A. ...	Lister Street ...	1	2	nil
Barraclough J. & Sons	Boys' Mill, stone chimney	1	2	1·0
„	Boys' Mill, brick chimney	2	3	1·6
Berry John ...	New Bank ...	1	3	nil
Berry Bros. ..	Hebble Lane ...	1	1	1·0
Booth J. & Sons ..	Lee Bridge ..	6	7	1·0
Bowman Bros. ...	Union Mills, Pellon Lane	6	13	2·3
„ ...	Lee Bank ...	2	7	0·5
Bradford and District Dyeing Co.	1, Lee Bank ...	4	7	0·4
„ ...	2, Lee Bank ...	6	7	0·2
„ ...	1, Old Lane ..	4	7	0·8

SMOKE OBSERVATIONS.—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Binns E. & Sons ...	West Parade ...	2	6	3·6
Booth & Co. ...	Arundel Street .	1	1	2·0
Butler J. ...	Adelaide Street ..	1	4	0·7
Carter J. & Co. ..	Dunkirk Mills ...	1	3	1·6
Calder & Hebble Co. . .	Engine House Lane ..	1	2	1·0
Calvert W. & Son ..	Illingworth Mill ..	2	8	1·8
Charnock G. & Sons .	Pellon Lane ..	1	3	1·6
„ ...	Charlestown Road ...	1	3	nil
Charlestown Brick and Tile Co.	Charlestown Road ..	1	3	1·0
Clayton & Murgatroyd	Lower Wade Street .	4	12	3·9
Crabtree J. ...	Well Lane ..	2	5	0·4
Crabtree T. ...	Salterhebble Cotton Mill	2	4	3·0
Crossley J. & Sons, Ltd.	Bank Bottom ...	1	4	nil
Crossley J. & Sons, Ltd.	Dean Clough ..	4	5	5·6
„	Old Lane ...	5	4	0·2
„	Office Chimney ...	8	7	1·8
„	Lee Bridge, stone chimney	6	3	0·3
„	Lee Bridge, brick chimney	6	4	nil
„	Range Royd ...	3	3	3·3
„	Dyehouse Chimney ...	2	4	2·7
„	Albion Mills ...	3	6	0·1
„	Hebble Mills ...	2	1	1·0

SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observa- tions taken.	Average number of Minutes of Dense Smoke emitted.
Crossland & Son ...	North Bedford Street	1	1	1·0
Coton C. ...	Raven Street ..	1	1	4·0
Crossley & Porter Orphanage	Skircoat Moor ...	1	4	0·7
Crown Hardware Co. .	Corporation Street ...	1	6	1·0
Charnock J. & Sons ..	North Parade ..	1	2	1·0
Carter & Wright ...	South Darley Street ...	1	1	nil
Dyson J. & Sons ...	King Cross ...	1	8	2·1
Drake J. & Co. ...	Foundry Street ...	1	5	nil
Eastwood A. ..	Craven Edge Mills ..	1	2	1·0
Earnshaw A. & Sons...	Grantham Road ...	1	5	0·2
Falcon Laundry Co., Ltd.	Salterhebble ...	1	4	0·2
Farrar J. B. ...	Lower Wade Street ..	2	9	0·8
„ ...	Well Lane ...	1	3	nil
Fleming A. ..	Grantham Road ...	1	5	nil
Farnell Elijah & Son...	Gibbet Street ..	1	4	1·0
Fleming, Birkby, Goodall & Co.	Hopwood Lane ...	1	5	1·8
Fletcher Bros. ...	Raglan Street, stone chimney	4	5	4·8
„ ..	Raglan Street, brick chimney	1	2	3·5
Foster W. H. ...	Woolshops ...	1	1	3·0
Green Joseph ...	Corporation Street ...	1	4	nil
Greenwood J. ...	Cross Hills ..	1	6	4·6
Haley M. ..	Stannary Street ...	1	3	nil

SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.		Number of Boilers working.	Number of Observa- tions taken.	Average number or Minutes of Dense Smoke emitted.
Harrison & Singleton	Horton Street	...	1	3	nil
Hartley & Sugden	Gibbet Street	..	1	2	1·5
Hanson Samuel	Adelaide Street	...	1	2	nil
Halifax Corporation Baths	Woodside	...	1	2	nil
Hanson W.	Jumples Mill	...	2	2	nil
Halifax Industrial Society	Northgate	...	1	3	nil
Halifax Workhouse	Gibbet Street	...	1	3	1·0
Halifax Corporation	Gasworks	...	4	3	nil
„	Electric Light Works	...	3	2	nil
Halifax Flour Society	Bailey Hall	..	4	7	3·8
Haigh Allen	Winding Road	...	1	5	1·4
Haxby & Sewell	Well Lane	...	1	3	nil
Hegginbottom	Hays Mill	...	2	5	2·4
Hebden W. C.	Winding Road	...	1	4	nil
Hirst & Sons	Weymouth Street	...	1	2	nil
Hitchen H.	Forest Mill	...	1	6	0·6
Hitchen John	Hall Street	...	1	1	nil
Highley N.	Croft Mill	...	2	5	1·0
Horsfall Eli	Commercial Road	..	1	4	0·7
Horsfall & Co.	Pellon Lane	...	1	10	2·2
Holdsworth J. & Sons	Shaw Lodge Mill	...	10	9	5·0
Hollingrake & Clegg...	Miall Street, old chim- ney		3	10	0·9

SMOKE OBSERVATIONS—*Continued*

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Hollingrake & Clegg...	Miall Street, new chimney	3	10	1·7
Hoyle J. & T. ...	Range Bank ...	4	5	nil
Hoyle Richard ...	Queen's Road ...	2	6	1·8
Hoyle Elkanah ...	Waterside, No. 1 chimney	1	5	1·8
„ ...	Waterside, No. 2 chimney	1	3	nil
Halifax Infirmary ..	Free School Lane ...	2	5	nil
Howarth G. ...	West End Works .	1	1	2·0
Huntriss Exors. ...	Well Lane ...	2	11	2·9
Inman Bros. ...	Hope Hall ..	1	4	1·5
Knight J. ...	Raglan Street ...	1	1	nil
Law & Sons ...	Square Road ...	1	4	1·7
Lightowler John ...	Waterside ...	1	3	nil
Lees Thomas & Co. ...	Spring Edge Works ..	1	8	0·1
Lumby, Son, & Wood	New Bond Street	1	5	2·0
Lees Bros. ...	King Cross ..	1	7	0·7
Mackrell J. E. ...	Lower Wade Street ...	1	6	0·6
Martin & Sons ..	Pellon Lane ...	3	4	1·7
Maude & Turner ...	Gibbet Street ...	1	3	1·3
McCrea H. C. & Co....	Eastfield Works ...	1	3	nil
McNaught & Co. ..	Hare Street ...	1	4	1·5
Mitchell Bros. ...	Pellon Lane ...	2	4	0·5
Milner & Co. ...	Raglan Street ..	1	7	0·2

SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observa- tions taken.	Average number of Minutes of Dense Smoke emitted.
Morton J. ...	Clipster Hall ...	1	4	3·0
„ ...	Siddal Lane ..	1	2	1·5
Moore Z. ...	Shaw Mill, Mixenden	1	5	0·8
Murgatroyd .	Bottoms Mill ..	1	1	3·0
Northern Engineering Co. ...	High Level Works ...	1	3	0·3
North Allen ..	Old Lane Dyeworks ...	1	2	1·0
Oates James ...	Ryburn Mill, stone chimney	1	5	2·2
„ ...	Ryburn Mill, brick chimney	1	5	2·6
Oates & Green ...	Horley Green Road ...	1	3	2·6
„ ..	Ellen Royd ..	1	2	2·0
„ ...	Beacon Road .	1	6	3·8
Ordish J. ...	Waterside ...	2	6	1·3
Pulman John ...	Hopwood Lane ...	1	2	0·5
Parker & Co. ...	Chapelton ...	1	3	1·3
Parker J. & Sons ..	Horley Green Road ...	1	3	nil
Pickles W. ...	Steam Laundry ...	1	1	2·0
Priestley James ...	Ovenden ..	1	4	2·2
Pohlmann & Sons ...	Hall Street ...	1	4	1·0
Patchett Bros. ...	Sedburgh Road, No. 1 chimney	1	9	1·1
„ ..	Sedburgh Road, No. 2 chimney	1	9	2·8
Pulman A. & Sons ...	Mount Street ...	1	3	2·6
Pickles & Sons ...	Victoria Mills ...	2	3	0·6

SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Ratcliffe W. ...	Alma Road ...	1	1	nil
Rawson W. H. ...	Old Lane ...	2	6	nil
Ramsden T. & Sons ...	Trinity Road ...	1	6	3·3
Robinson J. & Sons ...	Lower Wade Street ...	1	3	2·3
Robinson Enoch .	Battinson Road ...	3	5	3·4
Robinson J. ...	Prospect Mill ...	1	6	0·5
Robinson Jesse & Sons	Royal Mills ...	2	4	3·2
Redman Cornelius ...	Pioneer Works ...	1	2	1·0
Sagar J. & Co. ...	Water Lane ...	1	8	3·8
Scott Bros. ...	Johnson Street ...	1	2	nil
Smeeton G. F. ...	Stoney Royd ...	3	7	1·8
Smith David ...	Woollen Mills, Siddal	1	5	1·4
Smith Thomas ..	Siddal Lane ...	1	6	0·3
Smith & Wilshaw ...	Kingston ..	1	1	nil
Smith G. F. ..	Paragon Works ...	1	5	1·4
Smith B. G. .	Stannary Street .	1	3	1·4
Soothill & Simpson ...	North Castle Street ..	1	1	2·0
Smithson Joseph ..	Park Print Works ...	2	4	2·0
Sunderland & Thomas	Lower Wade Street ...	1	2	1·0
Smithson Joseph ...	India Buildings ...	1	4	nil
Simpson & Son, Ltd...	Heath Road ...	1	1	nil
Standeven & Earnshaw	Ladyship ...	3	2	nil

SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working	Number of Observa- tions taken.	Average number or Minutes of Dense Smoke emitted.
Standard Screw Co. ..	Dispensary Walk ...	1	6	nil
Stead Bros. ..	Hare Street ...	1	2	0·5
Stirk & Co. ...	Turney Street ...	1	4	1·0
Stott Bros. ...	Mount Street ..	1	3	1·3
Sutcliffe J. & Sons ...	Range Bank ...	1	3	nil
Swan Bank Brick and Tile Co.	Swan Bank ...	1	4	2·0
Speak Paul ...	Mixenden Shed ...	1	5	0·2
Taylor Joseph ...	Archer Street ..	1	4	0·7
Taylor and Hanson ..	North Bridge ...	1	5	0·2
Tetley & Co. ...	Bradshaw Mill ...	2	1	3·0
Thompson Joseph ...	Adelaide Street ...	1	2	1·5
Tillotson J. W. ...	Atlas Carpet Works ...	2	8	3·0
Turner Edwin ..	Dapper Mills ..	3	3	3·3
Turner John ...	Bedford Street ...	1	1	nil
Ward J. W. & Sons ..	Walnut Street ...	5	3	3·0
Ward R. D. ...	Hanson Lane, brick chimney	6	6	6·6
„	Hanson Lane, stone chimney	1	3	1·6
Wade Josiah ...	Hopwood Lane ...	1	4	1·0
Walsh, Brearley, and Eastburn	Beech Hill ...	1	8	1·5
Wainwright E. W. ...	Sun Works ..	1	14	4·6
Whitley S. & Co. ...	Hanson Lane ...	5	3	2·0
Whiteley J. & Sons ...	Brunswick Mill ...	2	4	nil

SMOKE OBSERVATIONS.—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observa- tions taken.	Average number of Minutes of Dense Smoke emitted.
Whitaker R & Co., Ltd.	Corporation Street ...	1	6	0·1
Willey R. C. ..	Trafalgar Works ...	6	9	4·5
Wood George ...	Pellon Lane .	1	5	4·0

TABLE SHOWING NUMBER OF PREMISES REQUIRING
INSPECTION BY THE MEAT INSPECTOR,
JOHN M. CARNIE.

Description of Premises.				Number.
Public Slaughterhouses	...	..	...	1
Private Slaughterhouses	...	...	...	7
Fish Curing Houses	...	...	...	5
Borough Market ...	...	...	...	1
Wholesale Market	...	...	...	1
Cattle Lairs ...	...	..	...	5
Potted Meat and Tripe Boiling Houses	...		...	50
Fried Fish Shops ...	...	...	...	66
Knackeries ...	...	...	...	1
Fat and Bone Boilers	...	...	...	3
TOTAL	...	...	...	140

TABLE SHOWING NUMBER OF VISITS MADE BY THE
MEAT INSPECTOR.

Description of Premises.				Number of Visits.
Public Slaughterhouses	...	...	...	985
Private Slaughterhouses	...	...	..	425
Fish Curing Houses	...	...	...	20
Borough Market ...	...	...	...	810
Wholesale Market	...	...	...	699
Cattle Lairs	...	...	...	109
Fasting Sheds	...	...	...	136
Knackeries	...	...	..	23
Potted Meat and Tripe Boiling Houses	...	...	...	550
Butchers Shops	...	...	...	765
Fried Fish Shops	...	...	...	354
Others	...	...	...	738
TOTAL				5614

TABLE SHOWING MEAT, FISH, FRUIT, &c., DESTROYED
AS UNFIT FOR HUMAN FOOD DURING
THE YEAR 1897.

Kind of Food Destroyed.					Quantity in lbs
Eighteen carcasses of Beef	...	...	...	...	8434
Eight carcasses of Pigs	...	...	...	...	876
Three carcasses of Veal	...	...	...	...	230
Fish ...	...	...	...	...	2368
Shell Fish	...	...	...	...	1472
Grouse	...	...	...	...	6
Fruit	...	...	...	...	100
Peas in pod	...	...	...	...	280
Nettles	...	...	...	...	96
Offal	...	...	...	...	1490
TOTAL	...	...	...	...	15352

Eight carcasses of Beef and two Pigs were suffering from Tuberculosis.

TABLE SHOWING NUMBER OF SEIZURES DURING THE
YEAR BY MAGISTRATES' ORDER, AND WITH
CONSENT OF OWNERS.

Month.			Destroyed by Magistrates' Order.	Destroyed with consent of Owners.	Total.
January	...	...	1	...	1
February	...	...	2	...	2
March	...	...	11	1	12
April	...	...	2	4	6
May ...	...	...	6	4	10
June...	...	...	...	6	6
July ...	...	...	4	4	8
August	...	...	1	5	6
September	...	...	3	1	4
October	...	...	4	2	6
November	...	...	4	8	12
December	...	...	2	5	7
TOTAL			40	40	80

TABLE SHOWING MEAT, FISH, FRUIT, &c., DESTROYED
AS UNFIT FOR HUMAN FOOD,
FROM 1886 TO 1897.

Years.	Meat.	Fish.	Fruit.	Other Articles of Food.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.
1886	4527	769	196	180	5672
1887	2110	17	...	...	2127
1888	6955	3672	30	80	10737
1889	3651	1646	70	...	5367
1890	15494	3062	230	2250	21036
1891	4182	6240	40	230	10692
1892	6724	5697	910	63	13394
1893	6028	3512	1064	989	11593
1894	6112	29156	177	406	35851
1895	8466	18661	180	458	27765
1896	14420	9615	1083	847	25965
1897	11030	3840	100	382	15352

THE FOLLOWING TABLE SHOWS THE POPULATION AND
ACREAGE FOR EACH DISTRICT, WITH NAMES
AND ADDRESSES OF INSPECTORS.

District.	Population.	Area in Acres.	Names and Addresses of Inspectors.
1	23879	1481	J. Archbell, The Square.
2	27804	620	J. Thompson, 11, Melville Place.
3	23824	832	J. E. Firth, 7, Randolph Street.
4	20220	5276	A. E. Bottomley, Branch Office, Illingworth.
	95727	8209	

District No. I.

INSPECTOR JAMES ARCHBELL.

Nature of Defects.	Number of Defects.
Defective Sink Drains	81
,, Cellar Drains	29
Made-up Cellar and Walled Drains	9
Defective Yard and Private Street Drains	131
,, Area Drains	9
Untrapped Sink Drains	7
Drains to Disconnect	22
Defective Water Closet Soil Pipes	26
Made-up Water Closets	11
Defective Water Closets	30
Untrapped Bath and Lavatory Waste Pipes ..	12
Bath and Lavatory Waste Pipes connected to Soil Pipes	11
Defective Roofing	9
,, Fall Pipes	15
,, Troughing	20
,, Urinals	5
Water in Cellars	64
Offensive Poultry	5
,, Pigeons	4
,, Swine	3
,, Swill Tubs	5
,, Rabbits	1
Houses Overcrowded	20

DISTRICT No. 1—*Continued.*

Nature of Defects.	Number of Defects.
Furnished Rooms Overcrowded	5
Offensive Accumulations	130
Ashpits requiring Reconstruction	3
Disused Closets	6
Closets and Ash Tub Places requiring Doors ..	27
Insufficient Privy Accommodation	6
Bad Smells	65
Nuisances from Workshop Chimneys	6
Drains Tested	73
Smoke Observations taken	391
Houses requiring Limewashing	64
Furnished Rooms requiring Limewashing ...	5
Closets requiring Limewashing	33
Visits to Lodging Houses	3
,, Houses where Fever Cases existed ...	375
,, Workshops	570
,, Factories	25
,, Furnished Rooms	301
Visits under the Shop Hours Act	310
Houses Inspected	620
Rooms Disinfected	378
Fever Cases removed to the Borough Fever Hospital	89
Samples purchased for Analysis	11

District No. 2.

INSPECTOR JOSEPH THOMPSON.

Nature of Defects.	Number of Defects.
Defective Sink Drains	40
,, ,, Pipes	25
,, Syphon Traps	46
Made-up Sink, Bath, and Lavatory Pipes ...	43
,, Cellar Drains	60
,, and Untrapped Area Drains	25
Defective and Made-up Basement and Walled Drains	52
Made-up Sink Drains	36
Defective Pan and other Closets	12
Made-up Water Closets and Closet Drains ...	34
Defective Closet Drains and Soil Pipes	48
,, Water Closet Cisterns	2
Untrapped Bath, Lavatory, and Sink Waste Pipes ...	13
,, Cellar Drains	4
Broken Closet Pots	3
Defective and Broken Fall Pipes	30
Made-up Fall Pipes and Drains	38
Defective Bell Traps in Cellars and Wash Houses ...	11
Made-up Yard and Private Street Drains ...	62
Defective Yard Drains	14
Broken Pot and Iron Traps	12
Made-up Gullies and Disconnecting Traps ..	36
Defective Urinal Drains	3
Bath Pipes to Disconnect	9
Defective Connections to Traps and Gullies ...	24
,, Roofing	4

DISTRICT No. 2—*Continued.*

Nature of Defects.	Number of Defects.
Offensive Middensteads and Accumulations ...	24
,, Ashpits and Privies . . .	5
Defective Troughing ...	42
,, and Made-up Troughing ...	27
Water in Cellars from Burst Water Pipes and Defective Flagging, &c. ...	28
Offensive Swine ...	2
Want of Urine Guides to Closets ...	9
Offensive Smoke ...	8
Insufficient Water Supply to Closets ...	3
Offensive Smells from Gas Mains ...	4
Houses Overcrowded ...	4
Dirty Houses ...	3
Doors off Closets and Ash Tub Places ...	34
Dirty Closets ...	5
Drains Disconnected ...	30
Visits to Workshops ...	416
,, Factories ...	24
,, Shops under the Shop Hours Act ..	326
Want of Ash Tub Places ...	2
Complaints of Untrapped Gullies ...	5
Visits to Fever Cases ...	392
Rooms Disinfected ...	267
Fever Cases removed to Borough Fever Hospital ...	71
Smoke Observations taken ...	186
Visits to Vans occupied as Dwellings ...	52
Drains Tested ...	106
Samples purchased for Analysis ...	22

District No. 3.

INSPECTOR JAMES EDWARD FIRTH.

Nature of Defects	Number of Defects.
Made-up and Leaky Sink Pipes	74
Defective Syphon Traps	38
„ Basement Drains	67
Made-up Cellar Drains	34
Defective and Made-up Water Closets	60
Old Pan Closets	8
Untrapped Bath and Lavatory Waste Pipes	10
„ Sink Drains	18
„ and Stone-walled Cellar Drains	26
„ Drains in Wash Kitchens	2
Defective Connections to Drain Pipes	11
Broken Fall Pipes	17
Made-up Fall Pipe Drains	40
„ Troughing	45
Defective Bell Traps in Cellars	18
„ Soil Pipes	3
Made-up Yard and Area Drains	67
Broken Pot and Iron Traps... ..	34
Disconnecting Traps without Grates	3
Drains Disconnected	32
Offensive and Made-up Urinals	11
Insufficient Privy Accommodation	4
Defective and Made-up Dry Traps	38
Damp Walls from Defective Roofs and Soil against Walls of Houses	10
Defective Cisterns to Water Closets	10
Sink Pipes connected to Soil Pipes	9

DISTRICT No. 3—*Continued.*

Nature of Defects.	Number of Defects.
Offensive Swine, Poultry, Pigeons, and Rabbits ..	6
,, Swill Tubs	2
Water in Cellars from Defective Drainage and Burst Water Pipes	63
Houses insufficiently Drained	5
,, Overcrowded	11
Dirty Houses	20
,, Closets	73
Doors off Closets and Ash Tub Places	64
Dilapidated Closets and Ash Tub Places	35
Offensive Accumulations and Middensteads	37
Nuisances from Smoke	6
Defective and Made-up Street Gullies	56
Rooms Disinfected	205
Drains Tested	110
Visits to Workshops	365
,, Factories	80
,, Shops under the Shop Hours Act	326
,, Furnished Rooms	64
,, Vans used as Dwellings	36
,, Houses of Infectious Diseases	384
No Abstract hung in Shops	11
Fever Cases removed to Borough Hospital	52
Smoke Observations taken	180
Samples purchased for Analysis	36
Want of Urine Guides to Closet Seats	27

OVENDEN AND ILLINGWORTH.

District No. 4.

INSPECTOR ALBERT EDWARD BOTTOMLEY.

Nature of Defects.				Number of Defects.
Defective and Drawn-out Syphons	...	...		19
Made-up and Defective Drains	...	...		68
Defective Bell Traps	...	...	...	5
Want of Troughing, Defective Troughing and Fall Pipes	...	...	...	40
Want of Proper Drains	...	...	...	39
Drains to Disconnect	...	...	..	58
Untrapped Drains	...	...	...	35
Fall Pipes to Disconnect	..	..	...	20
Made-up and Offensive Gullies	...	...	...	6
Made-up Disconnecting Traps	...	...	...	8
Water in Cellars	...	...	...	10
Dirty Closets	...	...	...	49
Dirty Houses	...	...	...	6
Damp Walls	...	...	..	2
Offensive Middensteads, Ashplaces and Accumulations				17
Offensive Swill Tubs	..	...	..	7
Untrapped Sumpstones	...	...	...	59
Dilapidated Privies	...	...	...	5
Doors off Ashplaces	...	...	..	6
Privies to convert	...	...	...	22
Want of Ashplace	...	...	...	1

DISTRICT No. 4—*Continued.*

Nature of Defects.				Number of Defects.
Insufficient Closet Accommodation	...	...	...	9
Streets to Pave...	...	.	...	12
Overcrowded Houses	...	...	...	6
Offensive Swine	...	...	.	3
„ Cesspools	...	...	...	4
„ Sewage	...	...	...	6
„ Pigeons	..	...	..	2
„ Lavatory Basins	...	...	...	6
Dangerous Roofs	...	...	...	2
Pollution of Drinking Water	...	...	...	8
Defective Floors	...	...	...	3
Houses unfit for Habitation	...	...	...	2
Old Pan Closets	...	...	...	2
Insufficient Supply of Water to Closets			...	1
Cases Removed to Hospital ..	...	...	...	43
Rooms Disinfected	...	...	...	249
Samples obtained for Analysis	...	...	...	38
Smoke Observations taken	...	...	...	98
Drains Tested	...	...	...	45
Notices Served	...	...	...	83

WORKSHOPS AND SHOP HOURS ACT.

TABLE SHOWING NUMBER OF TRADE PREMISES
REQUIRING INSPECTION BY THE
DISTRICT INSPECTORS.

District.	Workshops.	Under the Shop Hours Act.	Total.
1	241	201	461
2	410	274	684
3	193	322	515
4	83	25	108
	927	822	1768

WORKSHOPS.

TABLE SHOWING NUMBER OF TRADE PREMISES.

Trade.					Number.
Boot and Shoe Makers and Cloggers	...	...	...	...	152
Dress and Mantle Makers	...	...	...	...	124
Joiners and Cabinet Makers	...	...	...	...	75
Brush Makers	...	...	...	...	15
Saddlers	...	...	...	...	11
Mineral Water Makers	...	...	...	...	7
Milliners	...	...	...	...	65
Provision Merchant	...	...	...	...	1
Cotton Doublers	...	...	...	...	11
Rag Sorters	...	...	...	...	5
Coopers	...	...	...	...	4
French Polishers	...	...	...	...	17
Bakehouses	...	...	...	...	84
Tailors	...	...	...	...	61
Machine Makers	...	...	...	...	2
Flock Merchant	...	...	...	...	1
Marine Store Dealers	...	...	...	...	19
Silversmiths	...	...	...	...	11
Blacksmiths	...	...	...	...	28
Whitesmiths	...	...	...	...	24
Upholsterers	...	...	...	...	3
Coach Builders..	...	...	...	...	5
Umbrella Makers	...	...	...	...	2

WORKSHOPS—*Continued.*

Trades.					Number.
Rope Makers	...	...	...	...	3
Box Makers	...	..	...	...	3
Wood Carvers	...	...	...	...	3
Selvige Clippers	...	...	...	...	8
Surgical Instrument Maker	...	..	...	...	1
Woolsorter	...	...	..	...	1
Fruit Boilers	...	...	...	...	2
Roller Coverer	...	..	...	..	1
Cork Cutter	...	...	...	...	1
Paper Maker	...	...	...	...	1
Gun Maker	...	...	...	...	1
Hosiers and Knitters	...	...	...	...	36
Carpet Repairers	...	...	...	...	6
Wheelwrights	...	...	...	...	11
Picture Frame Makers	...	...	...	...	3
Painter	...	...	...	...	1
Wire Workers	...	...	...	...	3
Basket Makers	...	...	...	...	5
Plumbers	...	...	...	...	3
Tinners	...	...	...	...	19
Printers	..	...	...	...	14
Locksmith	...	...	...	...	1
Sweet Boilers	...	...	...	...	2
Dentists	...	...	...	...	4
Tripe Boilers	...	...	...	...	2
Cutler	...	...	...	...	1

WORKSHOPS—*Continued.*

Trades.				Number.
Clog Sole Maker	...	...	...	1
Underclothing Makers	...	...	...	13
Belt and Brace Makers	..	..	...	6
Venetian Blind Makers	...	...	...	3
Billiard Table Maker	...	..	...	1
Electrical Engineer	...	...	..	1
Sewing Machine Maker	...	...	...	1
Piano Makers ...	...	...	...	2
Shirt Makers ...	...	...	...	2
Soap Makers ...	...	...	...	4
Watch Makers ...	...	...	...	7
Drysalterns ...	...	...	...	2
Old Clothes Dealers	...	...	...	3
Leather Curriers	...	...	...	3
Boot Upper Makers	...	..	...	2
Pattern Makers	...	...	..	2
Mattress Maker	..	...	...	1
Cycle Works ...	...	...	...	1
Leather Cutter	...	...	.	1
Tea Packer ...	...	...	.	1
Sugar Packer ..	...	...	...	1
Brass Works ...	...	...	...	2
Designer ..	...	...	...	1
Laundry ...	...	..	...	1
Tanner ...	...	..	...	1
Clay Dryer .	...	...	...	1
TOTAL	...	...	...	927

FACTORIES AND WORKSHOPS.

TABLE SHOWING NUMBER OF VISITS MADE TO
FACTORIES AND WORKSHOPS BY THE
DISTRICT INSPECTORS.

District.	Number of Visits made to Factories.	Number of Visits made to Workshops.	Number of Visits under the Shop Hours Act.
1	25	570	310
2	24	416	281
3	80	365	326
4	97	272	25
	226	1623	942

FACTORIES AND WORKSHOPS.

The following Table shows the nature of Nuisances registered :—

District No. 1.

INSPECTOR JAMES ARCHBELL.

Nature of Nuisances.				Number Registered.
IN FACTORIES.				
Insufficient Privy Accommodation	...	...		10
Defective Water Closets	...	...	...	6
„ Drains	...	...	...	2
IN WORKSHOPS.				
Insufficient Privy Accommodation	...	...	...	3
Defective Water Closets	...	...	...	5
„ Drains	...	...	...	4
Want of Ventilation	...	..	...	2
Workrooms Overcrowded	...	..	..	5
„ requiring Limewashing	...	...	...	27
TOTAL	...	...	...	64

WORKSHOPS.

The following Table shows the nature of Nuisances registered :—

District No. 2.

INSPECTOR JOSEPH THOMPSON.

Nature of Nuisances.				Number Registered.
Rooms requiring Limewashing	..	...		20
Insufficient Privy Accommodation	...	..		5
Defective Water Closets	...	...	...	5
„ Drains	...	...	...	4
„ Roofs	...	...	..	3
Offensive Urinals	...	...	...	2
Made-up Drains	..	...	...	2
Defective Soil Pipes	...	...	..	2
Workrooms Overcrowded	...	...	...	2
Defective Bell Traps	...	...	..	2
Want of Ventilation	...	..	..	3
TOTAL	...	...	..	50

FACTORIES AND WORKSHOPS.

The following Table shows the nature of Nuisances registered :—

District No. 3.

INSPECTOR JAMES EDWARD FIRTH.

Nature of Nuisances.	Number Registered.
IN FACTORIES.	
Untrapped Water Closets	29
Made-up Water Closets	6
Offensive Urinal	1
IN WORKSHOPS.	
Defective, Broken, and Made-up Water Closets	2
Insufficient Privy Accommodation	4
„ Ventilation	4
Defective Roofs	2
Workrooms requiring Limewashing	19
Untrapped Water Closets	5
Dangerous Wall	1
Water in Cellars from Defective Drains...	2
TOTAL	75

FACTORIES AND WORKSHOPS.

Ovenden and Illingworth.

The following Table shows the nature of Nuisances registered :—

District No. 4.

INSPECTOR ALBERT EDWARD BOTTOMLEY.

Nature of Nuisances.				Number Registered.
IN FACTORIES.				
Offensive Closets	...	...	..	8
Dirty Closets	...	...	...	9
Offensive Urinal	...	...	...	1
IN WORKSHOPS.				
Dirty Workshops	...	...	...	8
Overcrowded Workroom	.	...	...	1
TOTAL	...	...	...	27

Cowsheds and Milkshops.

TABLE SHOWING NUMBER OF VISITS MADE TO
COWSHEDS AND MILKSHOPS.

Description of Premises.				Number on Register.	Number of Visits.
Cowsheds	...	...	...	67	257
Milkshops	...	...	...	91	285

DEFECTS IN COWSHEDS AND MILKSHOPS.

Nature of Defects.				Number of Defects.
Badly Ventilated Cowsheds...	...	...	...	2
Cowsheds requiring Limewashing	..	..	..	17
Dirty Cans and Floors	...	...	...	4
Insufficient Ventilation	...	..	...	2
Defective Drains	...	...	...	3
Untrapped Drains	...	...	...	3
Defective Water Supply	...	..	...	2
TOTAL	...	...	...	33

Bakehouses.

TABLE SHOWING THE NUMBER OF VISITS MADE TO
BAKEHOUSES DURING THE YEAR.

	Number on Register.	Number of Visits made.
Wheat Bread and Muffin Bakers, including Confectioners	72	416
Oat Bread and Muffin Bakers...	6	36
Pie Makers	6	19

TABLE SHOWING DEFECTS IN BAKEHOUSES.

Nature of Defects.	Number of Defects.
Defective Drains	3
Bakehouses requiring Limewashing ..	31
Dirty Floors	6
Underground Bakery	1
Untrapped Drain	1
Made-up W.C.	1
TOTAL	43

TABLE SHOWING NUMBER OF INFECTED HOUSES
VISITED BY THE DISTRICT INSPECTORS.

Wards.				Enteric Fever.	Scarlet Fever.	Continued Fever.	Puerperal Fever.	Diphtheria.	Total.
Ovenden	...	...	...	6	21	...	1	13	41
Northowram	...	...	...	11	28	...	2	1	42
North	...	...	...	9	35	1	1	...	46
Central	...	...	...	6	14	..	...	2	22
West	...	...	...	7	37	...	1	8	53
South	...	...	...	5	28	...	...	1	34
East	...	...	...	9	12	...	...	9	30
Southowram	...	...	...	4	50	...	..	3	57
Skircoat	...	..	...	6	146	...	...	1	153
Pellon	...	...	...	4	20	..	2	18	44
Kingston	...	...	..	3	44	...	...	3	50
Illingworth	...	...	...	8	42	...	1	8	59
TOTAL				78	477	1	8	67	631

Rooms Disinfected.

THE FOLLOWING TABLE SHOWS THE NUMBER OF
ROOMS DISINFECTED BY THE DISTRICT
INSPECTORS DURING THE YEAR.

Wards.					Number of Rooms Fumigated.
Illingworth	...	...	...	...	131
Ovenden	...	...	...	...	71
Northowram	...	..	...	...	61
North	..	...	...	...	59
Central	...	..	...	...	35
West	...	...	...	...	79
South	...	...	...	...	61
Kingston	...	...	...	...	73
Pellon	...	...	...	...	72
East	...	...	...	...	66
Southowram	...	...	...	...	91
Skircoat	...	...	...	...	171
TOTAL					970

Rooms Disinfected at Board Schools.

THE FOLLOWING TABLE SHOWS THE NUMBER OF
ROOMS DISINFECTED FOR THE
HALIFAX SCHOOL BOARD.

Name of School.					Number of Rooms Disinfected.
Pellon Lane	...	...	...	...	18
Queen's Road	...	...	...	..	14
Parkinson Lane	...	...	...	...	15
Booth Town	...	...	...	...	22
Akroyd Place	...	...	...	...	70
Portland Road	...	...	...	...	20
Siddal	..	...	...	..	16
Haugh Shaw	...	...	..	..	12
Moorside	...	..	...	..	36
Lee Mount	..	...	...	...	18
TOTAL					241

TABLE SHOWING THE NUMBER OF INFECTIOUS DISEASES
REMOVED TO THE BOROUGH FEVER HOSPITAL
BY THE DISTRICT INSPECTORS FOR
THE YEAR 1897.

Wards.	Typhoid Fever.	Scarlet Fever.	Diph- theria.	Continued Fever.	Total.
Ovenden ...	4	12	...	...	16
Northowram ...	2	14	...	...	16
North ...	3	27	...	1	31
Central ...	3	5	...	...	8
West ...	2	27	..	...	29
South ...	1	14	...	...	15
East ...	4	8	..	...	12
Southowram ...	...	23	2	...	25
Skircoat ...	3	37	...	...	40
Pellon ...	1	10	...	...	11
Kingston ...	1	17	...	...	18
Illingworth ...	7	25	...	...	32
Outside the Borough	3	18	...	...	21
TOTAL ...	34	237	2	1	274

Disinfection.

THE FOLLOWING TABLE SHOWS THE NUMBER AND
DESCRIPTION OF THE ARTICLES DISINFECTED AT
THE DISINFECTING HOUSE, STONEY ROYD
DURING THE YEAR.

Description of Articles.					Number of Articles.
Beds	...	...	..	...	996
Mattresses	...	...	...	..	1141
Pillows	...	...	...	...	1534
Sheets	...	...	...	...	653
Bolsters	...	..	...	...	613
Blankets	...	...	...	...	1522
Counterpanes	...	...	...	..	479
Bed Furniture	...	...	...	..	12
Curtains	...	...	.	...	22
Trousers	...	...	...	..	135
Coats and Vests		...	...	..	298
Rugs and Carpets		...	...	...	251
Drawers	...	...	...	...	178
Flannel Vests, Dresses, and Petticoats	...			...	790
Cushions	...	...	...	...	5
Hose	...	...	...	...	344
Mats and Sundries	...		...	...	1743
Dressing Gowns and Shawls			...	...	238
Shirts	...	...	...	...	31
Towels and Stockings		...	...	...	36
Jerseys	...	...	...	...	51
Suits	...	...	...	...	120
TOTAL					11192

Ovenden and Illingworth.

TABLE SHOWING NUMBER OF PREMISES REQUIRING
INSPECTION BY THE DISTRICT INSPECTOR,
ALBERT EDWARD BOTTOMLEY.

Description of Premises.	Number.	Number of Visits.
Bakehouses and Confectioners ...	4	37
Oat Bread Bakers	12	46
Cowsheds	217	775
	233	858

DAIRIES AND COWSHEDS.

Ovenden and Illingworth.

THE FOLLOWING TABLE SHOWS THE NUMBER OF
DEFECTS IN CONNECTION WITH COWSHEDS.

Nature of Defects.				Number of Defects.
Cowsheds Re-constructed	...	...	...	3
Want of Airspace	...	...	...	10
„ Light...	...	...	...	10
„ Ventilation	...	...	..	11
„ Tank...	...	...	...	5
„ Drains	...	...	...	17
„ Limewashing	...	...	..	120
„ Water Supply	...	...	...	1
Offensive Swine	...	...	...	1
„ Middenstead	...	...	..	1
Filthy Yard	...	...	..	1
Defective Floor to Cowshed...	...	...	...	1
TOTAL				181

THE FOLLOWING TABLE SHOWS THE NUMBER OF
 ASHPITS CLEANSED DURING THE YEAR IN
 OVENDEN AND ILLINGWORTH WARDS.

(FORMERLY THE LOCAL BOARD DISTRICT OF OVENDEN.)

Month.		Number of Ashpits emptied.	Loads of Soil.	Loads of Rubbish.	Total Number of Loads.
January	...	129	47	34	81
February	...	144	72	31	103
March	...	128	76	46	122
April	...	92	44	22	66
May...	...	160	64	29	93
June	...	119	37	36	73
July...	...	134	56	27	83
August	...	132	71	15	86
September	...	129	77	16	93
October	...	144	64	12	76
November	...	128	69	19	88
December	...	33	28	29	57
TOTAL	...	1472	705	316	1021

Streets Scavenging.

The following Table shows the work done in this Department :—

OVENDEN AND ILLINGWORTH DISTRICTS.

Number of Miles of Setting	...	...	$9\frac{1}{3}$
Number of Miles of Macadamised Roads		...	$16\frac{1}{2}$
Number of Streets Swept ..	...	...	1427
Number of Loads of Sweepings gathered		...	1004
Number of Gullies emptied	..	...	6139

TABLE SHOWING NUMBER OF ROADS AND STREETS
SWEPT AND AREA IN YARDS IN OVENDEN
AND ILLINGWORTH WARDS.

Number of Streets.	Number of times each Street Swept.	Lineal Yards.	Square Yards.
1	104	10,400	62,400
1	97	114,460	801,220
3	95	81,375	653,505
1	94	62,604	500,832
1	93	9,765	78,120
1	84	16,800	117,600
1	81	59,373	356,238
1	80	8,960	62,720
1	78	90,792	726,336
1	54	60,480	292,680
1	48	215,040	138,240
2	47	62,786	402,991
2	46	39,008	201,894
1	20	15,320	107,240
2	18	61,200	428,400
3	16	48,280	127,680
2	15	10,395	62,370
1	12	6,000	36,000
1	11	2,200	11,000
1	10	4,000	24,000
28	1103	979,238	5,191,466

Total Number of Miles Swept ... 556 $\frac{1}{8}$

Canal Boats.

During the year 65 Inspections have been made, and in every case the Boats were found clean and in good condition.

There has not been a single case of sickness or overcrowding during the year, and where women and children were on board, proper provision was made for the division of the sexes.

Of the 65 Boats inspected there were 9 with women and children on board, and 20 with women.

The Boats were free from bilge water, and ventilation fairly good, and proper provision made for the storage of water for domestic purposes, neither has there been any objections to the Inspections.

Canal Boats, 1897.

Number of Boats Inspected.	Number Registered to carry.	Number of Males on Board.	Number of Females on Board.	Total.
65	385	106	20	126

Ages of Children found on Canal Boats.

Ages ...			Months.				Years.							Total.
			4	6	8	11	4	5	6	7	8	9	10	
Number ...			2	1	1	1	2	1	1	1	1	1	2	14

TABLE SHOWING PROSECUTIONS UNDER THE FOOD AND DRUGS ACT.

Date.	Defendant's Name.	Nature of Offence.	Decision of Court.			Remarks.
			Penalties.	Costs.	Total.	
January 1st	Thomas Bolton ...	Selling skimmed Milk adulterated with 14% of added water	£ s. d. 1 0 0	£ s. d. 0 17 6	£ s. d. 1 17 6	
March 26th	William Rogers ...	Delivering Milk at Halifax Station, Feb. 26th, containing 8% of added water	1 0 0	1 5 0	2 5 0	This was consigned to J. Wood, Providence Dairy, 1, Lord Street
June 18th	George Wilcock ...	Having sold $\frac{1}{2}$ lb. of Liver that was diseased, unsound and unwholesome, to Mrs. Brier, on the 15th of May	5 0 0	0 8 6	5 8 6	Second offence.
July 16th	Elizabeth Ibbotson	Selling Whisky $5\frac{1}{2}$ degrees below legal strength	2 0 0	0 16 0	2 16 0	
July 16th	Benjamin Cromack	Selling Whisky 11 degrees below legal strength	2 0 0	0 16 0	2 16 0	

It will be seen from the foregoing Tables that the work of this Department compares favourably with any of the preceding years.

In consequence of the outbreak of Scarlatina (through infected milk) in the early part of the year, the important work of a systematic house to house inspection has not been carried out to the same extent as in previous years. In conjunction with this part of our work, the testing of drains has played a most important part; out of the 328 tested, no less than 72 per cent. were found defective, and put right; this shows the necessity of very strict supervision during the process of building, as it is evident no part of the work is more scamped, and yet none so important. To give a description of some of the work brought to light would astonish most people, and bring ridicule on those who do such class of work.

The Factory and Workshops Act has thrown a great responsibility upon the authorities, and a vast amount of work upon the Inspectors. During the last few years a wonderful improvement has been brought about in the sanitary arrangements generally, but, in consequence of the increased duties devolving upon Inspectors, it is a question whether the time has not arrived to appoint a man to devote the whole of his time to this work alone. 2,791 visits have been made to these places during the year, but when we take into consideration that there are 2,100 Factories, Workshops, and Shops under the Shop Hours Act to look after, it will be seen that we are only touching the fringe of this most important work. Constant supervision of premises, where the majority of the people assemble daily, is essential, in order that the arrangements from a sanitary point of view may be as perfect as possible.

The work in other branches has received the attention of your Inspectors, who I wish to congratulate upon the manner in which they have performed their duties, also the Chief Clerk (Mr. J. W. Jackson) and his assistants for the great assistance rendered in carrying out the work of the Department.

I am, Gentlemen,

Your obedient Servant,

DAVID TRAVIS,

Chief Sanitary Inspector.

County Borough of Halifax.

Report of the Public Analyst

FOR THE YEAR ENDING DECEMBER 31st, 1897.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

During the year 201 samples of foods and drugs have been submitted for analysis in accordance with the provisions of the Sale of Food and Drugs Acts, 1875 and 1879, and 14 samples of water.

The samples of water were mostly from wells ; 9 out of the 14 were unfit to drink either owing to the amount of organic pollution or else to the amount of dissolved lead, which varied from a tenth of a grain to as much as a grain and a quarter per gallon.

The nature and number of the samples of foods and drugs analysed are shown in the following Table :—

1897. Quarter ending	Milk.	Butter.	Lard.	Cheese.	Coffee.	Pepper.	Mustard.	Sweets.	Ginger.	Gin.	Whisky.	Rum.	Sweet Nitre.	Sulphur.	Total.
Mar. 31st ...	28	...	...	...	...	...	...	..	...	...	...	...	8	...	31
June 30th ...	27	2	...	...	...	...	...	...	3	4	6	4	...	...	46
Sept. 30th ...	31	5	5	3	...	...	..	6	4	..	...	...	4	4	62
Dec. 31st ...	35	4	...	...	11	6	6	...	...	...	...	...	...	...	62
	121	11	5	3	11	6	6	6	7	4	6	4	7	4	201

The results of the analyses may be classified as follows :—

	Genuine.	Doubtful.	Adulterated.	Total.
First Quarter ...	24	4	3	31
Second „ ...	41	1	4	46
Third „ ...	59	0	3	62
Fourth „ ...	57	5	0	62
Total ...	181	10	10	201

The genuine Samples formed 90% of the whole lot examined, or, if we include the doubtful cases, 95%; the remaining 5% being the adulterated articles. The following are the adulteration figures for the last dozen years :—

	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Percentage of Adulterated Samples ...	9·3	15	1·8	2·6	11·4	6	3	5·4	6·7	1·5	3·2	5

The figure for adulteration in the past year, although higher than in the previous two years, is not a high one as compared with the rest of the country. According to the last Local Government Board Report for 1896-97, 9·2 is the lowest per cent. of adulteration for the whole country which has yet been attained, and Halifax is mentioned as one of the 16 districts in which the Acts are efficiently carried out, with the consequent low percentage of condemned samples.

The following are the cases of adulteration :—

Date.	Kind of Sample.	Nature of Adulteration.
Feb. 22	Milk ...	9% added water.
„ „	„ ...	9·5% „
„ 26	„ ...	8% „
June 9	Whisky ..	5½ degrees below legal strength.
„ „	„ ...	9½ „ „
„ 18	„ ...	5¼ „ „
„ „	„ ...	11 „ „
Aug. 24	Milk ...	57% cream abstracted.
„ „	„ ...	33% added water.
Sep. 29	Sulphur ...	29·8% sulphate of lime.

The largest share of attention has been devoted to milk, as befitting its importance as an article of food, the milk samples forming 60% of the whole lot analysed. Besides the five cases of adulteration detected, all the ten articles classed as of doubtful genuineness were milks, which would probably have had to be condemned with a definite legal standard of quality, such as many advocate at the present time. The adulterant, as usual, has been water, with the two-fold danger of (1) possible infection from some polluted water supply, and (2) deprivation of infants of the nourishment necessary for their growth and well-being.

Precipitated sulphur is another article calling for comment. The sample condemned contained 29·8% of sulphate of lime, an injurious compound foreign to the nature of precipitated sulphur, and present owing to a

cheap and defective method of preparation. Buyers will do well to ask for precipitated sulphur, and not for milk of sulphur; they will then be less liable to get an article containing its own bulk of plaster of Paris.

The samples passed as genuine have for the most part been of excellent quality.

I am, Gentlemen,

Your obedient Servant,

WILLIAM ACKROYD,

PUBLIC ANALYST.

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